The Builder.

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The Gallery of Antique Sculpture, Cambridge.

SIXTY years ago the University of Bonn formed its Museum of Casts from ancient sculpture for the use of students of classical archæology. Cambridge has at last followed this example, and no archæologist will tax her with any undue forwardness in the matter. Indeed, some of us will think that the opening festival held on the 6th of May might well have been preceded by a day of solemn fasting and humiliation for obvious duty long neglected. Still, strange though our inertia may seem in German eyes, and far behind as Germany has left us in the race, Cambridge is first in England, and all her sons and daughters are justly proud. She is only just in time to grasp these belated laurels. The Museum at South Kensington, though not yet open to the public, is well advanced, and, as Mr. Newton wittily said, even Oxford, hard beset, cannot much longer continue to

> "dally with her golden chain,
> And, smiling, put the question by."

The need seems so pressing, so obvious, that it is somewhat hard to see why, long ago, it was not supplied. As was said by more than one speaker at the opening, a museum of casts is as necessary to the teacher of archæology as a chemical laboratory to the teacher of chemistry. Indeed, thus much Cambridge was not slow to recognise. As soon as she decided that the subject should be taught she was sufficiently logical to provide the proper means of teaching. Where her conviction tarried was as to the fitness of the subject. Was this subject of Greek art, or was it not, anything more than a sort of elegant trifling, a graceful topic for amateur leisure, but beneath the dignity of the serious student? Could it or could it not be made the object of precise and systematic teaching? This was the doubt that lurked in the mind of Cambridge, and, though unconfessed, paralysed her action. It would be an ill day, she felt, when her classical undergraduates ceased to sharpen their wits on the whetstone of grammatical niceties, and sought to cover their ignorance by the jargon of art terminology. It was a natural, and perhaps a just suspicion, and it behoves the friends of archæology to look well to their work that they in no way justify it. There is a danger, and it can only be neutralised by facing it boldly. In archæology there is an opening for slipshod work, arising from that very mixture of the scientific and literary elements which makes the study so fascinating. In the teaching of classical *language* Cambridge has, in the course of centuries, matured a system so fine, so finished, that it affords a mental training which is, we are bold to say, unrivalled. It is still an open question whether, as a means of training, the subject of archæology can be developed in like manner; if it can Cambridge will do it, if it cannot we are sure,—nay, more, we hope,—that archæology, *as a subject for university teaching*, will not persist. At this very moment the examiners are at work settling the first papers of the new archæological branch of the tripos, and those papers begin the test.

We have said that England is late in the field, but even the late comer has advantages,—he profits by the experience of bolder pioneers. Coming fresh from the magnificent Cast Museum at Berlin, the largest and far the most complete in the world, and which has grown by the accretions of years, we were conscious that, on its smaller scale, and at least for beginners, the Cambridge Museum was the better place for study. Every cast museum must to a certain extent be a compromise between ideal arrangement on the one hand, and the exigencies of space on the other; but at Berlin constant new acquisitions have pushed this compromise to a point that is perplexing to the unaccustomed eye. In the large Archaic room at Berlin are gathered together from sheer want of space representations of schools and periods the most diverse. Assyrian and Phœnician sculptures look down on the recently-discovered frieze of Djölbaschi, the Amazons of Scopas confront the rude, grinning Medusa from Selinus. This is rather pleasant than otherwise to the expert, but the eye of the novice is unduly troubled. At Cambridge, classification, beginning when material was far more copious, has had full and easy scope. In the matter of mere chronology he who runs may read. As we enter the door we are at Delos, and the first cast that meets our eye is the earliest bit of Greek sculptural art we possess, a copy in stone probably of some old temple xoanon or sacred wooden image, an almost shapeless woman figure. This lady of stone had hard measure dealt out to her by many of the speakers; in turn they took up their parable about her; she was a "mere fetich," a "rude idol," a "formless block." They had all seen her as they passed, and each had his stone ready to throw at her; it was wonderful, one speaker said, that from this rude inarticulate beginning should develope all the vital speaking wonders of advanced Greek art,—all the Apollos, the Aphrodites, and the rest of the Olympian throng. It was wonderful, and to some of us it is infinitely sad and pitiable, that a beginning so simple, so earnest, so right as the Delos figure should end in the decadence of Græco-Roman art, so dissolute in its complex laxity. We wondered how many of the speakers had paused as they went in and read on the robe of this Delos figure the story of her making,—"Nikandre dedicated me to the Far-darter, the archer goddess." This early stone statue does not appear in our plates, but we have spoken of her advisedly, not because she has been so recently discovered, nor because of the great interest of her inscription to epigraphists, but because she strikes the keynote of all the subsequent utterances of Greek art; she was an "Agalma," a sacred offering, a thing beautiful in the eyes of the gods. Greek art had its basis in religion, and ceased to flourish when it ceased to be religious. Art took its rise from Greece, not as in Egypt, in the desire for realistic portraiture of the mortal, but in the longing to portray in human form the deathless gods. It learned, no doubt, from other nations much of technique that was common to all; it even, no doubt, imbibed something of the naturalism of Egypt, something of the symbolic phantastic manner of Chaldæo-Assyria, but what was peculiar, intrinsic, unique in Greek art was its faculty of idealisation, of producing that which is according to, yet beyond, nature,—what never has been, yet always might be. Where art takes its rise in religion realism is impossible. It is an obvious impiety. Two courses remain: either the artist must utter his mind in symbolism, must create fantastic, unnatural forms which *mean* much which *are* nothing, which form a mere complex of attributes with no substantive existence, such as the Cherubim of the Chaldæo-Assyrian (this course the Greek artist rejected, his love of beauty, his naturalness held him back); or the artist must idealise, must think his gods in human form, must take refuge in human shapedness, in anthropomorphism. It is the peculiar merit of the Greeks that they fearlessly adopted this course. We are so used to this method of idealisation now that we scarcely realise its full significance, or of what tremendous issue were its first beginnings. Those first beginnings were made when, from the worship of a board, a post, a stone,—such fetich objects as Eastern nations delighted to honour to the end, the Greek turned to worship such gods as the stone Artemis at the Cambridge doorway, simple of form indeed, but no fetich, a human goddess near akin to the Olympian Zeus himself. In the first gallery, which leads up to the room figured in Plate iii.,

we have representations of all the various phases of archaic art. We have the heavy draped Ionian style of a certain soft luxurious quality, well seen in the Samos Hera and the analogous Branchidæ statues. We can see at a glance how the island schools of the Ægean were the stepping-stones by which certain methods of art passed from Asia Minor to Greece proper. We can study in the metopes of Selinus how the fearless naturalism (verging on the grotesque) of the West contrasts with the careful, studied conventionalism of Asia Minor. We can watch in the so-called "Apollos" of Orchomenos and Thera the rise of a school whose special object was the study of the nude, athlete form, and which, though its ultimate origin is still obscure, we are accustomed to call Peloponnesian. Or, turning from the technique which expresses to the thought which is expressed, we can see how three tendencies were ever at work among the Greeks, all of which issued in idealism; how, as we have noted, they made the images of their gods in human form; how, in their statues of athlete figures, they by degrees so perfected this human form that it became the fitting habitation and embodiment of their conception of the gods; and how, midway between God and mortal, there stood the figure of the hero,—half divine, half human,—the artistic link between heaven and earth. These three tendencies, anthropomorphism, the cult of heroes, and the striving after perfection of physical form, work together through the art of the archaic and transitional period to culminate ultimately in the idealism of Pheidias.

But we are anticipating a little, and a glance at our first view checks our too rapid advance. Through the columns in the distance, about the centre of the picture, we see the figure of Apollo with the right-arm outstretched. On his left-hand, but only appearing dimly in our plate, is a group of a Centaur struggling with a Lapith woman; to the left side of our plate, a crouching slave appears. All these are fragments of the western pediment of the temple of Zeus at Olympia in which was sculptured the great battle of the Centaurs and Greeks at the marriage-feast of Peirithoös. Apollo in the centre of the pediment appears to stay the strife and save his Greeks from their monster foes. The eastern corresponding pediment was sculptured by Pæonios, and represented the contest between Pelops and Œnomaus, a local myth connected with Olympian cults. Fully to study these pediments as compositions and to see the place they take in the development of Greek art, we must see them, or, rather, casts of them, in the Olympian Museum at Berlin, where each several figure is either already restored or about to be restored and raised to at least something like its approximate architectural height: where, further, casts in miniature of the two pediments, east and west, with their full architectural surroundings, are placed side by side, and the striking contrast between the styles of Pæonios and Alkamenes springs at once to light. From Berlin we should naturally expect that on the vexed question of these Olympian sculptures should issue some "clear disposing word," and, indeed, the last view expressed (*Arch. Zeit.*, 1883, p. 359) by Prof. Curtius is full of suggestion. For beauty of composition, for ideality of expression in the several figures, he unhesitatingly gives, as antiquity probably did, the palm to Pæonios; but he sees in the two pediments respectively two conflicting tendencies, each characteristic of archaic art,—in the pediment of Pæonios the tendency to severe and excessive symmetry, to a rigid architectural structure in composition; in that of Alkamenes a too great naturalism, an over-wrought vitality showing itself in action unduly strained. These two conflicting tendencies could fuse and mingle only in the fire of a genius such as Pheidias. The art of Pheidias we shall always reserve as the object of final contemplation; but if we wish to see the processes by which perfection was attained, we must watch this Olympian period of struggle and transition.

In the recess on the right-hand side of the plate stands the severe, simple figure known as Hestia Giustiniani of the Torlonia collection. From certain other analogous figures we may safely take her as a type of the Peloponnesian school, a school whose traditions were tinged with a certain precision of theory, a certain mathematical correctness, that culminated in the well-known canons of Polycleitos and Lysippos. The drapery of this Giustiniani Hestia is of an austerity verging on hardness, very far removed from the richness, the complication, the variety and flow of line which even early Ionic work shows. It was the mission of the Peloponnesian school to perfect rather the nude form of the athlete.

Far in the distance of our front view, a step beyond the Olympian sculptures, the horsemen of the Parthenon frieze come first into sight, to remind us of the perfect Pheidian period, when all these struggles of thought and technique ended in the peace of absolute accomplishment. But perfection never tarries long. It was the special mission of Pheidias to embody the highest conceptions of the chief among the gods in the most perfect form; by the faculty of ideality he eliminated all that was trifling, all unnecessary detail, all that was disturbing, all the petty tumult of the passing hour. But our next view (plate iii.) lands us in a region which, if still ideal, is at best a lower Olympus. We have left Pheidias and descended to Praxiteles. His one certain genuine work, the Hermes with the child Dionysos rightly dominates the room, standing in the recess at the end, and clearly visible from the first moment we enter the museum. In our view it is hazy and dim in the distance. All our conceptions of Praxiteles must, of course, be referred to this statue as the standard, little famous though it was in antiquity, and possibly ranking, as Prof. Brunn conjectures it did, among the early, immature works of the master. The group round this Hermes is instructive. On his right hand is one of the many supposed replicas of the famous Sauroctonos, Apollo killing the lizard; on the left is the Munich Aphrodite, an echo of the motive of the statue made by Praxiteles for the Cnidians. But of this statue there are many echoes. Why not choose the clearest? There is a statue in the Vatican analogous in pose to the Aphrodite, but of far finer work, draped by a prudish Pope in tinfoil garments,—this one it is that comes the nearest of all copies to something of Praxitelean charm. On either side of the Apollo and the Aphrodite come two statues of Hermes, instructive for comparison with the centre original. It is only when these replicas of Praxitelean types are gathered together that we realise how wide the gulf between Pheidias and Praxiteles,—how about the elder is the atmosphere of gracious calm, a peace of the upper air, while about the younger there is charm indeed, but also pathos and unrest. Leaving this definitely Praxitelean group, we find to the right a youth who has just of late much exercised the minds of archæologists, — a Dionysos wearing a fawn skin; looking at him closely we should be struck by the wonderful, effeminate beauty of the god's carefully-ordered hair. But the style, the feeling of the work is puzzling; some see in his pose a touch of Polycleitos, others much of the soft manner of Praxiteles. Perhaps the clue lies in this very difference of opinion. The statue,—charming though it is—(and, indeed, to our mind it is more pleasing than the noted Hermes), still fails to satisfy the practised eye as belonging to any known, well-defined school; the inference may be that it is an eclectic work of later days, though it has none of the condensed self-conscious restraint that characterises, for example, the school of Pasiteles.

But we must pass on. Next to the problematic Dionysos is the now well-known sculptured drum from Ephesos, of date approximating that of Scopas. Next to the column our own seated Demeter of Cnidos, which reminds us that, though England has lagged behind in the study of archæology, one Englishman at least stands in the forefront of discoverers. Last, the Munich group, Eirene, with the child Ploutos in her arms, a group unnoticed at Munich till Prof. Brunn, in his brilliant fashion of re-discovery, saw in it a copy of the bronze by Kephisodotos, father of Praxiteles, the ancestor of what he has himself humorously called the "nursery-maid motive." We cannot pass unnoticed the "Praying Boy," who stands with arms uplifted in the centre of the room, more especially as his fame is likely to decline before the bronze athlete from Salamis recently acquired from the Sabouroff Collection for the Berlin Museum. The two will ill bear juxtaposition.

From this varied Praxitelean world it is no harsh transition to our next view. Two Venus types closely analogous stand opposite each other; the Apollo Belvedere and the Artemis of Versailles show their familiar faces in the distance. Showy and unsatisfactory they are, but for the sake of old times, when some of us knew no better, and loved them, let us look at them tenderly: they are deities discrowned, dead loves, and *de mortuis nil*, &c. We end to-day where we used to begin; we blame what we used to praise, and we are right and safe, for the historical method has given us a true abiding standard; only let us beware that our change of attitude be really taste the permanent, not fashion the fluctuating.

If we began with doubts about the merits and particular virtue of archæological studies, our doubts give way in the presence of so much collective beauty. If any one finds casts dispiriting because they are not originals, he is a Sybarite in art with jaded sensibilities hard to stir; for us we feel that it is good for us to have been there, we cherish the old forlorn, deluded hope that some effluence goes forth from beauty to those that behold her, and that to generation after generation of undergraduates this Cast Museum will be to each, according to his kind, a palace of delight, an influence for hope, for aspiration, or for peace.

The building, with the sculptures and fittings, has cost about 12,000*l*. There has been lately in the air a pestilent theory, or perhaps rather a floating hope and desire of the uneducated and ill-educated, that ancient art and literature might "conveniently and economically be neglected together." Cambridge has made a solid and substantial protest against this heresy. But that this protest was made, that it took a form so necessary, so objective, so permanent, was, we are bound to remember, mainly due to the energy, the patience, the insight of one scholar. In his opening speech, the Slade Professor of Fine Arts said that Cambridge had been to him a kind nurse and mother; and Cambridge in her turn will write against his name, in grateful tribute to a great work done,—

Θρεπτήρι ἀντέδωκε τῆς ἐμῆς τροφῆς.

BUILDING CONSTRUCTION.*

THIS is an age of examinations. An increasing tendency is shown to insist that all who profess a knowledge of any art or science shall give some proof of having gone through a course of study in the same before being allowed to practise. Whatever opinion may be held upon the real value of these examniations, there can be no doubt that their institution has led to the production of a number of most excellent text-books for students. In law, in medicine, and in architecture, as well as in those subjects comprised in the ordinary school curriculum, the facilities for acquiring knowledge are infinitely greater than they were twenty years ago. We are not denying the existence of the materials for acquiring the knowledge, and we have little doubt that the enterprising student who would work carefully through the larger treatises on his special subject and make himself master of them would turn out a better man than the one who simply consults at second-hand the "maestri di color chi sanno." But apart from the mere money cost of large works on technical subjects, and the time necessary for mastering their contents, the student was met by one great initial difficulty which frequently disheartened him at

* Notes on Building Construction. Arranged to meet the requirements of the Syllabus of the Science and Art Department of the Committee of Council on Education, South Kensington. Part II. Commencement of Second Stage or Advanced Course. Second edition. London: Rivingtons. 1884.

the outset. This was that he was unable to find anywhere clear explanations of elementary matters. The merest smattering of knowledge used to be considered sufficient to enable its possessor to write an elementary hand-book, whereas the fullest knowledge and the widest practical experience are really required for the full elucidation of the rudiments of any subject. This is quite as true in regard to architecture as to everything else, particularly on its practical or scientific side, and we welcome Messrs. Rivingtons' series of "Notes on Building Construction" all the more warmly from the keen recollection of a student's difficulties in acquiring a sound knowledge of structural principles and details, the lack of which often heavily handicaps a man in after-life. Nothing is more likely to lead to scamped work in a building than for the workmen to find out that the architect does not know whether, for instance, the brickwork of the walls is properly bonded, or whether the joinery is framed in the right way or the wrong; and if the work is scamped the defects will, sooner or later, make themselves apparent to the discomfort of the occupier, who will begin to question the advantage of employing an architect at all. No amount of knowledge obtained from books alone will suffice without actual observation of the various operations carried on in building; but clear explanations and good illustrations will be of material assistance.

Part II. of this series of Notes is in continuation of Part I., and describes and explains more complicated details of construction. Compound walls are described, and the evils attending the construction of the inside casing of a wall of different materials from the outside are fully noted, and some very practical remarks are made upon the exclusion of damp from walls. The necessity of horizontal damp-proof courses is fully insisted upon, but nothing is said as to the great efficacy of a vertical damp course in basement walls; this can be easily and cheaply arranged by building the wall below the ground level with a cavity of about three quarters of an inch, and filling in with boiling asphalte, the top of the cavity being at the level of the horizontal damp course. The remarks on hollow walls are very good, but we should have been glad to see an illustration of a window or door opening in a hollow wall, as it is in these positions that the treatment of such walls offers the chief difficulties to students. We wish the author had expressed in a more thorough manner his disapproval of the system of tuck-pointing. He says simply that by it "badly-executed work is disguised and made to present a good appearance." This is, however, of the most ephemeral nature, and we know of nothing much worse than the appearance after a year or two's wear of a brick wall tuck-pointed in the approved modern fashion, with the vertical joints ruled with a straight-edge one above another without the slightest care whether they coincide or not with the real joints of the brickwork. The explanations of the various kinds of irregular bond in brickwork are good and the diagrams clear; and an excellent and full description, with illustrations, is given of the way of arranging flues and chimney-stacks with their bond.

In carpentry we find queen-post roofs fully treated, the king-post roof having been described in Part I., and a good illustration of what is too often dispensed with, viz., the angle brace and dragon beam to support the hip-rafter at the angle of a building. The chapter on built-up beams and strengthening timber girders might, we think, have been omitted, as these have been almost entirely superseded by iron girders; and, moreover, we can find no mention of them in the Syllabus of the Science and Art Department, upon which the arrangement of these "Notes" has been based. The chapter on roof-coverings is good, but it might have been made more complete by a description of some of the modern kinds of tiles that have been lately brought into the market, such as Phillips's patent lock-jaw roofing tiles. Taylor's patent is the only one that is mentioned.

Nothing in building construction offers more difficulties to the architectural student than joiners' work. He will doubtless frequently have to trace sheets of details prepared by one of the senior assistants in the office, but unless he gets a careful explanation of their meaning, they will be utterly unintelligible to him; and many a man at the expiration of his articles would be completely puzzled if he were asked to draw a full-sized detail of a sash-window, with inside boxed shutters. In the book under notice, the section on joinery is well done; the different kinds of joints are explained, the purpose of grounds and linings is described, and the best way of fixing them, and the intricacies of folding and sliding shutters are made clear by some carefully-drawn illustrations. Skylights and lanterns are described, and a full account is given of the proper way of making and fixing of staircases, and excellent directions are given for planning them in different positions, and for constructing winders, &c. We notice, however, a remark concerning skirtings which is decidedly misleading. If there is one thing more than another indicative of scamped and careless work, it is the practice of leaving the space behind the skirting of a room unplastered. Not only does the hollow harbour vermin, as the author admits, but it is the cause of both sounds and smells passing from one room to another: and an architect should not only describe in his specification that the plaster is to be carried down behind the skirtings to the floor-level, but should always see with his own eyes that this has been done. The author does not appear to see any very great necessity for this, as he simply observes "the plastering is sometimes continued down to the floor to fill it [the hollow behind the skirting] up." We should strongly advise him to add these words in his next edition: "*and this should invariably be done.*"

In ironwork the different parts of roof trusses are described, and the best means of connecting them together and of attaching the trusses to iron columns is shown as clearly as can be done by untinted illustrations. The necessity of providing for the expansion and contraction of iron roofs is not lost sight of, and various methods of attaining this object are shown. There is an instructive chapter on riveting and riveted joints, giving all the information likely to be required by a student; and this is followed by a good account of various kinds of fire-proof flooring, including several French systems. This is a subject which has scarcely received the attention in this country which its importance demands. The value of land in London and in nearly all our large cities has increased so enormously that there is a growing tendency towards the erection of huge piles of buildings such as are to be seen in the American cities. But there no expense is spared to render the whole building perfectly fireproof, while in this country it is too often done in a half-hearted manner from motives of economy, with the result that in case of fire the building turns out not to be fireproof at all. We should have been glad if the author had been able to include a description of some of the American systems, such as P. B. Wight's system of Chicago, the Clinton Wire Cloth system, and others.

Plasterer's work is fully and accurately described, and useful information is given as to painting and glazing; but there is a remark anent varnishing, with which we certainly cannot agree. The author says "the surface of woodwork should be treated with size before being varnished to prevent it from swelling; this also fills up the pores and causes a saving in the quantity of varnish used." Now, the effect of size,—and we assume glue size is meant,—is to form a thin glaze on the surface of the wood, so that the varnish adheres to this glaze alone, and does not become incorporated with the wood. No doubt a saving in the amount of varnish is effected, and at first the appearance is as good as if double the amount of varnish had been used, but the least shrinkage in the wood causes the varnish to crack, and, for lasting work, glue size should never be used. The best method of treating woodwork is first to apply a coat of gold size, which is a species of thin varnish that fills up the pores of the wood, and then to follow with two coats of varnish, washing the work down with clean cold water between the application of the two coats. Thus treated varnished work will last three times as long as if sized and varnished in the ordinary way. Paper must be treated quite differently, and here the use of glue size is a necessity.

The work concludes with a chapter on shoring and scaffolding, and one on foundations. In the former the modern plan of using a derrick-crane for hoisting materials is mentioned, but it is not stated, what we believe to be a fact, that in the case of a building of any size, the cost of hoisting materials in this way is about half that of any other. With reference to foundations, the cream of the information to be obtained from larger works is given, but on this subject nothing but practical experience will be of much avail to the young architect.

On the whole, these "Notes" are thoroughly well done; we should ourselves have been rather disposed to let Part III., which treats of the nature of building materials, precede Part II., which treats of the details of their application; but the whole series will prove of the greatest possible assistance, not only to elementary students, but also to those who are further advanced.

THE NEW EDDYSTONE LIGHTHOUSE: A STRUCTURAL ADVANCE IN THE CONSTRUCTION OF SEA-TOWERS.

IT is now some seven years since the Corporation of Trinity House, which had for some time directed anxious attention to the great tremour which was caused in the Eddystone Lighthouse by each wave-stroke during heavy storms from the westward, came to the conclusion that one of the noblest monuments of marine architecture which the world possessed gave unmistakable signs of approaching the term of its existence. Built, as most of our readers may be aware, by Smeaton in 1757, on the destruction by fire of the wooden tower erected by Rudyard, in 1706, after the disappearance, in a violent storm in 1703, of the original lighthouse built by Winstanley in 1699; the structure of the Eddystone tower was long regarded as one of the proudest triumphs of that class of architecture. The bond given to the stones, by dovetails, cramps, dowels, and trenails, was such as almost to emulate the unity of vegetable growth. But in the constant strife of 120 years duration, the never slumbering energy of the attack found two weak points that were assailed with success. So graceful was the curvilinear outline of Smeaton's sea tower, that the waves ran up it as they played on its base; and striking, at a height of 60 ft. above high-water level of spring tides, on the underside of the projecting cornice of the lantern gallery, actually lifted the portion of the building above this level. In 1839, and again in 1865, the upper part of the structure was strengthened, the projection of the cornice was reduced by 5 inches, and strong wrought-iron ties were introduced, extending from the lantern floor downwards to the solid base of the tower. The leakage which had followed on the shaking of the upper story was thus arrested, but the undermining action of the sea on the gneiss rock on which the tower was built proved more irresistible, and it was finally determined to erect a new tower, on the same rock, at a distance of 120 ft. from the site selected by Smeaton. The only drawback to the new site was that a large portion of the foundation had to be laid below the level of low-water spring tides. This difficulty was overcome by the skill and energy of Sir James Douglass and his staff with extraordinary success. The first stone of the foundation was laid by H.R.H. the Prince of Wales on August 19, 1879, and from that day until the latter end of the December following, 131 landings were effected on the rock, work was carried on for 518 hours, and 114 stones were set in seven courses, the average working time secured being nearly four hours per landing.

In March, 1880, work was resumed, and by the 17th of July the whole of the cylindrical base was completed. This part of the structure, as to which no corresponding feature existed in Smeaton's tower, is one of the alterations introduced by Sir James Douglass which merits the closest attention. It is 44 ft. in diameter, and 22 ft. in height above the rock-cut foundation, the top being 2 ft. 6 in. above high water springs. The elliptic curve of the tower itself springs from the solid platform afforded by this cylinder; allowing a ring of 5 ft. diameter around its crown. The object of this step was to break that upward run of the waves which, as before mentioned, so often obscured the light, and which had developed such mischievous effects on the cornice of Smeaton's tower.

The younger men of the present day, as Sir R. Rawlinson justly observed on the occasion of the reading, at the Institution of Civil Engineers, of a paper descriptive of this new lighthouse, can scarcely appreciate the difficulties that have been met and overcome by the builders. Working in a rough tideway, excavating and laying the foundation courses below low-water level, fighting step by step with an unresting sea, in which it was often barely possible to keep the tender at her moorings, the builders of the new Eddystone have completed a work which, among similar structures, is unrivalled both in rapidity of execution and in cheapness of cost. The estimate for the work was 78,000*l*. The lowest tender received was considerably in excess of this sum. On this being discovered it was determined that the work should be executed under the care of Sir James Douglass, without a contractor, and the prime cost was only 59,255*l*., which was equal to 18s. 2d. per cubic foot.

It is known that, theoretically speaking, the most advantageous outline for a sea tower is one formed by a hyperbolic curve. The volume of a tower, thus designed, of 120 ft. high, 42 ft. in diameter at base, and 16 ft. in diameter at top, is close upon 63,000 cubic feet, while 85,000 cubic feet is contained in a conical tower of equal dimensions. In the New Eddystone, the focal plane is at an elevation of 132 ft. above high-water level, or 60 ft. higher than that in Smeaton's tower. The diameter of the tower is 34 ft. at the base, and 18 ft. at the under-side of the cornice. With the exception of space allowed for fresh-water tanks, the masonry is solid for 25 ft. 6 in. above high-water level; from which point the thickness of the wall gradually diminishes from 8 ft. 6 in. to 2 ft 3 in. The masonry consists of 2,171 stones, containing 62,133 cubic feet of granite, or 4,668 tons.

The object of the drum, or cylindrical base, from which the shaft springs, was to break the force of the waves, and cause them to fall over on themselves instead of running up the shaft of the tower. The further advantage of a convenient landing platform is offered by the design. In the old tower the water frequently fell in a cascade over the lantern, thus obscuring the light; a mischief which has been altogether obviated by the stepped base, and superior height of the new tower. It has been asked whether the expedient of a step thus introduced could not be advantageously repeated, giving a stepped, instead of a curvilinear, outline to the base of the tower. The reply to this question is, that the size to be given to the step depends on the magnitude of the wave that assails it. In 1834 the stepping of each course of masonry was adopted by Mr. Walker at the Menai Lighthouse; and Sir James Douglass freely admits that where small waves have to be dealt with this profile is the true one. But it was found at the Bishop, the Wolf, and other rock lighthouses, that the effect of small steps was very feeble in arresting the upward trend of a very large wave, being, in fact, little more than roughening the surface of the curve given by Smeaton. By the large cylinder, the large wave is at once divided; and the heavy stroke of the falling water is received on a compact mass of solid granite masonry, which is far stronger to resist the impact than the gneiss rock on which the tower stands has proved to be. It is admitted that a heavier blow is delivered on the cylindrical than on the doubly-curved surface, although it does not seem clear that the difference can be more than that due to the sine of the angle of impact; but the blow is delivered at the point where the structure is best able to receive it, and at the point of least leverage, and thus has the least destructive effect on the rock foundation below. And the secondary blow, as that on the under side of the cornice, which proved to be the most destructive part of the assault of the sea on the tower of Smeaton, is thus entirely avoided.

What sort of a blow the sea can strike is not now mere matter of comparative estimation. That, in certain conditions, it is so heavy as to be irresistible by any mass of concrete, whatever its solid bulk, owing to the low specific gravity of the material, seems to be unquestionable. Mr. Thomas Stevenson is the inventor of an appliance, called the marine dynamometer, which measures the actual force of the impact of a wave. In 1843 and 1844 the average force of the waves at Skerryvore was ascertained by this instrument to be a little over 600 lb. per square foot. During the winter it rose in the same locali y to more than threefold that energy, or to above 2,000 lb. per square foot. At the Bell Rock, the highest indication attained was over 3,000 lb. per square foot; but at Skerryvore a maximum of 4,335 lb. per square foot was attained, and Mr. Alan Stevenson subsequently recorded the enormous stress of 6,000 lb. per square foot.

The design and structure of sea towers is a branch of architecture that follows laws and rules of its own. Under no circumstances are larger demands made, not only on the skill and foresight but also on the courage, hardihood, and perseverance of the architect than in the case of such a lighthouse. The account of the erection of the Bell Rock Lighthouse, by Mr. Robert Stevenson, in 1807-10, has all the breathless interest of fiction, as fiction was written by its greatest master in the English tongue,—we cannot call the dramas of Shakspeare fiction. Since the demolition of Smeaton's Eddystone tower, Stevenson's Bell Rock tower remains as the earliest existing type of a class of bold and skilful works, still few in number, which has each converted a dark sunken danger into a source of light, guidance, and safety to the sailor.

The method of dovetailing together all the stones, both vertically and horizontally, which was introduced by Sir James Douglass in the Wolf Rock Lighthouse, and is described in his paper on the same, has carried out the original idea of Smeaton to still greater perfection. The stone employed was granite. The blocks for the solid portion of the towers were quarried at Dalbeattie, and delivered on the site of the work ready dressed and fitted On the completion of the solid portion of the towers, the granite for the higher courses was supplied from the De Lank quarry. The stones were set in Portland cement.

Year established.	Name.	Architect.	Height.	Contents.	Cost.	Per cubic foot.
			Ft. in.	Cubic feet.	£.	£.
1757	Eddystone	Smeaton	68 0	13,343	40,000	2 19 11½
1811	Bell Rock	R. Stevenson	100 0	28,530	55,619	1 19 0
1844	Skerryvore	A. Stevenson	150 0	58,580	72,200	1 4 8
1853	Bishop Rock	J. Walker	110 0	35,209	34,559	0 19 7½
1861	Smalls	J. Walker	125 0	46,386	50,124	1 1 7
1862	Hanois		100 0	24,542	25,296	1 0 7
1870	Wolf Rock	J. H. Douglass	110 0	59,070	62,726	1 1 3
1872	Dhu Heartach	D. A. Stevenson	107 5	42,050	72,584	1 14 6
1873	Longships		110 0	47,610	43,869	0 18 5
1881	Eddystone	J. H. Douglass	133 0	65,198	59,255	0 18 2

A gradual increase in size is so remarkable a feature of the progress of the art of the lighthouse builder, that it will be interesting to subjoin a table showing the contents, and also the cost, of ten of the most famous of the sea-towers that now protect our stormy coasts.

The contents and prices are given by Mr. W. T. Douglass. The dates, heights, and architects' names we have added; but have not traced the name of the architect of the Hanois or of that of the Longships Lighthouse.

NOTES.

THE latest volume of the Transactions of the Institute of Architects is a really valuable one, and ought to go far to answer those malcontents who insist upon it that the Institute is doing nothing for the profession. The voluminous paper by Mr. Robins on "Fittings for Applied Science Instruction Buildings," together with the hints and comments contributed by various other speakers, some of them experts in relation to the subject treated, and the large number of beautifully-drawn plans and sections of buildings and fittings, combine to render this paper one which in itself gives definite practical value to the volume containing it, and which no architect who is concerned in the planning of such buildings ought to ignore. Of special interest in another way is Mr. Tarver's paper on "English Monuments of the Sixteenth and Seventeenth Centuries," also very largely illustrated. Col. Parnell's rather eccentric paper on the "Action of Lightning on Buildings" had the merit, besides its boldness and originality, of eliciting several valuable contributions in the course of the debate; and Mr. W. H. White's review of the education and position of architects in France during the last two centuries is another valuable and exhaustive paper on a subject on which he has special qualifications for speaking, and with which we in this country are not very familiar. Whatever differences of opinion there may be as to details, the volume is, to say the least, no commonplace production.

IT is hardly to be supposed that the decision of the Committee against the Parks Railway Bill closes the subject; we shall probably hear more of it, with modifications, before long. But the decision is a satisfactory indication of the necessity which is felt for very great caution in admitting a scheme which may prove a permanent injury to the Parks, and which, practically, could not be got rid of when once carried out. It is not yet by any means proved that the ventilation of the tunnel could be efficiently carried out without intermediate openings, and the want of actual junction with the main line at Westminster would be a serious drawback to the usefulness of the new line. Whatever the ultimate result, it is much better that more consideration should be given to the scheme before anything definite is done.

THE system which appears to have been adopted in regard to the proposed Liverpool Cathedral competition, of inviting architects to send three sketches of churches they have built or designed, and from these selecting some to compete, is a good enough plan in itself; but in declining any drawings which have been made since the date of the advertisement inviting them, the committee have possibly deprived themselves of the ideal best man they are looking for, and cut out all the genius which may be latent among the youngest members of the profession. It is quite possible that some young man of genius, who has not yet built a church, may be stirred up by the greatness of the occasion to do something great. From this chance the committee have cut themselves off, unless they reconsider their decision, and determine to take the sketches on their actual merits, without asking when they were done.

MR. JUSTICE FIELD'S judgment in the case of the Gas Light and Coke Company *v.* The Vestry of St. Mary Abbotts, Kensington, gives

"check" to the steam-roller to some extent. The laudable anxiety of the defendants to do their work efficiently had led to a continued increase in the size and weight of their steam-rollers, followed by a corresponding increase of breakage in the plaintiffs' gas-pipes. It was argued for the defendants that plaintiffs should have laid their gas-pipes deep enough to have been out of the reach of the pernicious effects of the roller; an argument which we observe that some non-professional newspapers have taken up as the rational answer in the case. It is not, however, in all cases possible to do this; there are drains to be considered, for example, the level of which is fixed by unalterable requirements of fall. The learned judge ruled that the steam-roller was not to be regarded as ordinary traffic; it was extraordinary weight moved over the road for a special purpose. The effects of ordinary traffic could be counted on, the possible enlargement of steam-rollers could not; and it has evidently been felt that their power had increased, was increasing, and ought to be diminished. Both plaintiffs and defendants were doing public service, but must do it so as not to injure each other; and the employment of very heavy rollers was simply a question of supposed economy of power: that is the effect of the judgment on a rather curious point in regard to rights on the public way. The damages were merely nominal, the object of the action being to ascertain the rights on each side.

THE visitor to Mr. Whistler's small exhibition at Messrs. Dowdeswell's Gallery in New Bond-street comes, after passing through the front shop, into an apartment which is at least an exceptionally charming and effective bit of colour-harmony as a whole. An upper wall of a delicate rose-tint, with dado and mouldings of various tones of grey (it is called a "harmony in flesh-colour and grey"), hung with small works representing various "Harmonies" and "Notes" in colour, produces on the eye a soft misty effect of delicate colour which seems to pervade the air of the apartment, and not merely to lie flat on the walls. The general effect is certainly far more successful than the "harmony in white and yellow" which astonished the eye in another of the artist's exhibitions not very long since. When we come to study the paintings separately, of course there is much more room for difference of opinion. Some of them, though bearing such high-sounding and significant titles, are little better than daubs; others, which appear so at first view, and on close inspection, fall into their place wonderfully when viewed at what we take to be the distance the painter intended: numbers 6 and 9, for instance. A good many contain figures of young girls reading, lounging, in various attitudes, their dresses and surroundings giving the colour combination which is denominated "Pink Note" (N.B. Not a *billet-doux*, but a "note" in the scale of colour), or "Harmony in Violet and Amber." These figures are very slightly sketched, and their faces will certainly not bear looking close at; but they nearly all have character in pose, and show that there is good drawing underlying their shadowy similitude; one in particular, "Yellow and Grey" (43), a girl standing before a background of yellow, is charming in attitude and in the masterly indication of the figure. A life-size oil painting of a child called "The Blue Girl" is admirable in its way, both in colour and drawing, except (in regard to colour) the shaded side of the face, which looks as if not clean. The programme is prefaced by a highly characteristic little profession of faith, in axioms after the Euclidean manner:—"A picture is finished when all trace of the means employed to bring about the end has disappeared"; "the completed task of perseverance only has never been begun, and will remain unfinished to eternity,—a monument of good will and foolishness," &c. Of course these are only half truths, but they are at least one side of the truth, expressed in a very pungent manner. Of course, too, some of the drawings are little more than smudges, and all, except the "Blue Girl," want precise delineation; but it is not because Mr. Whistler cannot draw with precision if he chooses. He has chosen to evolve an eccentric type of art for himself; and we have no wish to see imitators of him; but there is a method in his madness, and, as his own, it is a refreshing little vagary, and has, at least, the merit of being what may be called "anti-Philistine"; and though some of it may be absurd, those who think it merely absurd proclaim their own defect of perception.

LORD STRATHEDEN AND CAMPBELL'S intended motion in regard to smoke abatement, which was to have been brought forward (as we mentioned) last week, but owing to circumstances was postponed, is now to be replaced by a Bill, to be introduced next week in the House of Lords, to give discretionary power to each vestry to compel the use of either smokeless fuel or smoke-preventing grates within its own jurisdiction; or, more strictly speaking, to legislate for the prevention of smoke, leaving it to householders (for the present) to adopt whichever method they find may enable them best to comply with the provisions of the Act. It is hoped that, without attempting at this moment any such serious scheme as compulsory prevention for the whole of London, this permissive power given to the vestries may induce one or another of these governing bodies to lead the way in making the experiment within its own district, and thus afford a practical test of the possibility of dealing with the subject by legislation. To have selected any district arbitrarily for experiment would have probably raised the opposition of that district; by the plan proposed the onus of putting the machinery in motion will be left with the parochial authority of each district.

THE members of the Sunday Society and other friends of the Sunday opening movement having almost unanimously pronounced in favour of an annual motion being made in the House of Commons for opening on Sunday afternoons the whole of the museums, galleries, and libraries supported by national funds, it has been decided, after consultation with Parliamentary friends, to adopt this course, and a motion will this year be introduced by Mr. Geo. Howard, M.P., and Mr. Thos. Burt, M.P. This annual test of Parliamentary opinion seems a very good scheme for keeping the subject before the public mind, and securing a record of the progress of the movement, even if it lead to no immediate result.

THE history of English costumes which Mr. Lewis Wingfield has contributed to the Health Exhibition is certainly attractive, and, to a very limited extent, instructive; but the figures are nothing like being sufficiently numerous, and the details are often wrong. It is a fact,—scarcely credible or creditable,—that not one of the representative gentlemen of the last century wears a sword, and that the cane,—and such a cane!—is introduced at every period of history. The boots, also, of the huntsmen in particular, are clearly incorrect as regards material. The whole series bears evident traces of hurry,—a characteristic apparent in many of the departments.

THE decision of the Railway Commissioners in favour of the Post Office, in regard to the laying of over-head wires to connect the Fire Brigade stations in Battersea, Wandsworth, Tooting, and Clapham, gives a slight and, perhaps, useful check to the rather exaggerated clamour against all over-head wires whatsoever which has been raised. That a number of wires working in a large system should be placed underground is right and reasonable, but it is hardly reasonable to demand that one wire, necessary for a most important service to the district affected, should be placed underground at a cost which would probably have proved prohibitory.

MESSRS. TOOTH & SON'S exhibition of water-colours at their gallery in the Haymarket is a small collection of drawings with a considerable proportion of good work among them. There is a delightful little Chevilliard, "Criticism is easier than Art"; a fine interior by Mr. A. C. Gow; some good specimens of G. A. Fripp, Birket Foster, Mrs. Allingham, Louis Leloir, and other well-known names. The central work is Fred. Walker's reproduction in water-colour of his memorable painting, "The Harbour of Refuge."

THE sale of plate, porcelain, pictures, and furniture, which belonged to the late Mr. Charles Skipper, occupies three days of this week at Christie's. Some things of great beauty and interest are under the hammer. Three separate catalogues are issued. In the first day's sale (Thursday), though its artistic value may be small enough, the object of greatest general interest is the "Kemble Testimonial," a large piece of plate presented to the actor upon his retirement from the stage in 1817. The admirers of Irving could hardly, in his honour, amend the legend:—"To John Philip Kemble, on his retirement from the stage, of which for 34 years he has been the ornament and pride; which to his Learning, Taste, and Genius is indebted for its present state of refinement; which, under his auspices, and aided by his unrivalled labours, most worthily devoted to the support of the legitimate drama, and more particularly to the glory of Shakspeare, has attained to a degree of splendour and propriety before unknown, and which, from his high character, has acquired increase of honour and dignity: THIS VASE, by a numerous assembly of his admirers, in testimony of their gratitude, respect, and affection, was presented, through the hands of their president, Henry Richard Vassall, Lord Holland, June 27th, 1817." "More is thy due than more than all can pay." The erection is 26 in. in height; it is three-sided; on one side is the tragic queen crowning the actor; on another is Cupid pointing to a bust of Shakspeare; on the third the inscription just quoted. China lovers will have found much to delight them in a large collection of Dresden, and another of Sèvres porcelain. Amongst the former is a fine old dinner-service in 167 pieces. Of promiscuous specimens, the most important perhaps are two large Worcester vases by Flight, Barr, & Barr, which must, therefore, have been made between 1813 and 1829; and a fine pair of old Wedgwood vases. The last day of the sale (to-day) will be devoted to the pictures. These are mostly modern.

THE grievances of the Wellington statue die hard. They again occupied, on Tuesday, the House of Lords in a debate of considerable length, *à propos* of two motions, one by Lord Stratheden and Campbell, that the statue should not be removed till we had an opportunity of judging of the new one which is to replace it; the other by Lord De Ros, that the statue should not be removed from London. The first-named motion was eventually withdrawn in favour of Lord De Ros's "amendment," which was carried by a majority of 22. As there is no talk now of destroying the statue, and as the present Duke has expressly stated his opinion that by the course proposed "full respect is paid to the memory of his father," the subject ought to be considered settled. The debate was amusing enough in some ways, and the suggestions as to the possible social and political consequences of deporting the statue reminded one of the tag sentence of a well-known farce,—"The thunderclouds that are now closing over the political horizon," &c. Certain gallant officers, too, had been in the habit of raising their hats to the statue, and would lament the loss of their idol; but, as Lord Powerscourt, in a very practical spirit, observed, those gallant officers might as well raise their hats to a good statue of the Duke as to a bad one. Let us hope we shall get the "good one."

Surveyors' Institution. — The annual general meeting of this Institution will be held on Monday next at three p.m. The annual dinner will take place on the same evening in the Venetian Saloon of the Holborn Restaurant.

ARCHITECTURE AT THE ROYAL ACADEMY.—IV.

WE have not for many a day seen so strange a design as that described as "Front-door Gable, Collyers, Petersfield, Hants: Bateman & Keates" (1,280), and in saying this we do not wish to be understood to imply anything in disparagement of the same. It is so entirely original as almost to baffle criticism, and must be judged by canons as yet unformulated. We feel in the presence of a new phase of art, and are compelled to suspend our judgment thereon.

The drawing shows in geometrical elevation a street frontage of perhaps 30 ft., comprising a ground-story, a first floor, and a large expanse of gable above it. What is behind the gable, and whether it is only an artistic sham, we are unable to conjecture. The materials employed are apparently red brick, some variety of red stone resembling Mansfield in tint, and here and there a little black and white marble, or may be tiles. The spacing of the solids and voids throughout is little less than audacious.

In the centre of the first floor the two segments of a semicircular arch are separated by a short length of horizontal lintel, to accommodate a shield bearing a coat of arms. On each side of the central division two semicircular arches continue the arcade, one on each side being pierced as a window, and two fractions of similar arches, one on each extremity of the façade, complete the series, their curves running abruptly out at the quoins.

In the centre of the ground-floor is an ogee-headed doorway, the archivolt enclosed by horizontal and vertical lines of labels and the spandrels filled in with chequers of black and white. The apex of the ogee bears a vase on which the word "PAX" is inscribed; and from the vase a free arrangement of not ungraceful foliage expatiates in the arched recess above. A helmet and crest fill a small niche at a higher level, and the string-course is broken over a narrow panel bearing the legend, "MORS VIA AD VITAM." The side windows on the ground-floor are placed centrally with the arcade above, and their outer jambs are within 14 in. of the lateral limits of the frontage. The windows resemble in general design the central doorway, their summits having similar but smaller sprays of foliage delicately designed and drawn. The large gable is occupied in a singular manner. A chimney-stack rises from the foot of each raking coping. In the centre a very small circle is filled with glass, and from it long horizontal and vertical bars form a cross, the arms terminating in circles containing respectively the words "SANS DIEU RIEN." An owl peeps from a foliage-sheltered nook on one side, and a (?) jackdaw from a corresponding nook on the other side. Every brick is delineated with praiseworthy decision, the minutest detail being portrayed with rigorous exactitude.

A little comedy is being played out for the amusement of the spectator. At the left-hand window the son and heir is making love to the parlour-maid, while his mother, who is dressed for a morning walk, discovers his secret and pauses in the porch in listening wonder. A skye terrier, the companion of her walk, is excited at the discovery; but is too well educated to disturb so dramatic a situation by barking, and a white cat dozes on the sill of the companion window, giving to the whole the necessary sense of repose. We give a simple description of the composition and its accessories, but abstain from hazarding any opinion upon its merits as a work of art. To many it will probably be an occasion for a scornful sneer, and others will see in it, no doubt, the only real hope for English architecture. For ourselves, if compelled to make the avowal, we confess to a sort of liking for what is, at any rate, entirely original,—a quality too rare to be contemptuously treated,—and for the daring directness of its expression, not without some misgiving, however, that the authors are making game of us, and that the whole thing may be an elaborate jest.

1,241 (Sketch of South Door, Bourges Cathedral, France) and 1,257 (Sketch of Staircase of Hospital at Santa Cruz, Toledo, Spain), both by R. T. Blomfield, are most beautiful and conscientious studies in pencil of very complicated architectural subjects, and we commend them to the notice of all students. Such exercises, so patiently wrought out, are more valuable as a training for the eye and hand than acres of the dodgy "flicked up" pen and-ink drawings which just now appear to fascinate the ingenuous youth. While on this subject, we may again advert to the patient care shown in Mr. G. E. Jeaffreson Jackson's "View from Guard-room of Churchyard, Mont St. Michel, Normandy" (1,212), and the "Château de la Gendarmerie, Caen" (1,269), in which extreme faithfulness of portraiture is combined with light and atmosphere almost beyond what one would have supposed capable of attainment with such simple means as pen and ink. A very beautiful drawing (1,281) of the south transept of Westminster Abbey, by A. Hemingway, and a more (cheaply) effective drawing of "The Tomb of Lord Treasurer Burleigh, in the Church of St. Martin, Stamford," by Mr. G. C. Horsley, are excellent examples of their respective kinds. Of decorative works and designs for stained-glass there is a fair sprinkling, but, with the exception of the design for the decoration of St. Paul's (before noticed by us) nothing which calls for any very special mention. Designs for stained glass do look so very much like one another, and so very unlike the real thing, and the effect of the decorative treatment of a room 50 ft. long cannot be conveyed in a drawing of the size of a sheet of foolscap. In 1,219, Mr. Owen W. Davis shows a Pompeian design for the decoration of a vestibule, full of much graceful ornament and pleasing colour; and 1,322 "A London Drawing-room," by Geo. Aitchison, A., the treatment of the walls in a dull, rich gold, is sumptuous in the extreme. Messrs. Heaton, Butler, & Bayne show a design for decorating the hall of a City company (1,342), and display all their accustomed skill in this class of work. A high wainscot *dado* is surmounted by pictures from the history of the company; portraits of distinguished members of the guild figure in the great hall window and their arms in roundels above, and in the deep frieze which runs round the upper part of the wall. By a pretty conceit the animals, whose hides form the staple of the company in question, leap and sport in and out of the convolutions of the ornament which is framed of forest foliage. It is a thoughtful and pleasing scheme, and would, we have no doubt, look well in execution,—would, in fact, gain in effect with the enlarged scale of the actual work.

FURTHER NOTES ON THE ACADEMY PICTURES.

MR. FILDES'S brilliant painting, "Venetian Life" (390), representing a group of young women at the doorway and on the steps of a house opening on one of the canals, is certainly among the successes of the year. The light is concentrated on the centre figure, a blonde girl with a mass of white muslin spread over her knees, on which she is at work; there is no story in the picture, it is simply a group, brilliant and glowing in colour and finely drawn. His single figure, "A Venetian Flower-Girl" (747), enshrined amid a wealth of flowers, is perhaps even finer; and, compared with the artist's work of last year, "The Village Wedding," these Venetian pictures strikingly illustrate his versatility. Among other Venetian subjects is Mr. Woods's "Il mio Traghetto" (390), a Venetian ferry and its owner and family, and Herr Van Haanen's "Afternoon Coffee" (721), a clever but rather vulgar interior of a work-girls' shop, containing figures of some variety of character thrown together in a confused group with no attempt at composition, and one or two of them very carelessly drawn. Far beyond these in artistic excellence are Herr de Blaas's two pictures, "After Church" (423) and "Secrets" (832), the latter, a small work of three figures, exceptionally clever in drawing and expression, almost surpassing his "Flirtation" of last year.

Mr. Briton Rivière's best work is "The King and his Satellites" (88), a very large lion followed by a group of jackals, in whose bickerings and furtive glances at the big animal a great deal of humour is expressed. His "Eve of St. Bartholomew" (52), a girl with a blood-hound, is incomprehensible in relation to its title; and "The Enchanted Castle" (437), where a very stagy-looking knight in eccentric armour mounts the steps of a portico, in the doorway of which two "small but healthy tigers" stand in a menacing attitude, looks like an elaborate joke. Going back to the first room, and touching on some of the remaining figure-subjects in order of hanging, we may notice a figure by Mr. Long (28), which is called "Judith," but might have any other name; and a very clever work by Mr. Holl, a portrait of a young boy with a sword, and the title, "Did you ever Kill anybody, Father?" (67), an idea apparently taken from an incident in "The Newcomes"; the colour is a harmony in red and black; the look of alarmed and anxious inquiry on the boy's face is capitally given. Mr. Faed's two works in this room (87, 93) are in his second-best manner only.

In Gallery II., Mr. Morris's "Crowns of Joy and Sorrow" (117) is a churchyard scene, in which the emblems of baptism and burial are combined; a pretty picture with "a moral" in it. A very pointed little scene is Mr. Dendy Sadler's "Experientia docet" (129), card-playing between two priests, a puzzled novice and an elder and very astute man, whose face expresses good-humoured malice at the success of his play. We are very glad this capital artist is not going to keep in one groove in his subjects. Mr. Collier's large portrait group of the four "Daughters of Colonel Makins, M.P." (136), is a little too much of a romping scene, where the eldest, a grown-up young woman, is down on the floor, and the others pelting and otherwise worrying her; an effort at variety in portrait-painting not quite in good taste; the face of the elder girl is a beautiful bit of colour, the others rather hard. Mr. Frederick Brown's "Candidates for Girton" (168), where a girl playing schoolmistress is examining some others who stand in a row against a wall, is very spirited and life-like; below it hangs a very different scholastic subject, Mr. Eyre Crowe's "School at the Aitre St. Maclou, Rouen" (169), an old half-timber house with a long line of little girls ranged before it, each one a separate study. Mr. Cooper's enormous cattle-picture in this room is one of the things that must be protested against; the wall space occupied by this hard mechanical production, a mere repetition of what the same artist has done scores of times before, is simply stolen from some of those who might, but for the want of the mystical "R.A." after their names, have far more rightly claimed it. Mr. Holl's portrait of Mr. Carbutt (155), and Mr. Ouless's of Canon Freemantle and Mr. Bancroft, (162, 190), are among the good portraits of the year; and Mr. Storey's "Art and Nature: a Study of Tone and Colour" (189), is an interesting and elaborately-painted interior on a small scale.

Most of the prominent works in Gallery III. have been already mentioned in our former article; we must draw attention, however, to Mr. Faed's best work, "Of What is the Wee Lassie thinking?" (267), a painting with a single figure of an interesting-looking child seated before the fire, and showing the successful treatment of low but harmonious tones which marks Mr. Faed's best work. A difficulty in painting scenes of peasant life, of these islands, is that truthfulness of representation almost necessitates dull and faded hues in raiment and surroundings, which it is difficult to render agreeable to the eye. Mr. Leslie is much better off in his (artistic) rank of society; in his "Thames Roses," where a pretty girl sits with her feet on the window-seat of a riverside house, there is plenty of opportunity for warm and harmonious colour; and the level lines of the figure, the window, and the river outside, give a peculiar expression of repose to one of the pleasantest of Mr. Leslie's recent works. Mr. Marks's "The Angler's Rest" (292) falls short of his usual point and humour; the angler is painted from the same model whom we remember as the impatient listener to the recitation of a poem in another recent work of the artist. Mr. Holl's portrait of the Prince of Wales (298) as "Master of the Bench of the Honourable Society of the Middle Temple," is a good specimen of a ceremonial portrait,—a kind of work that only looks in place when hung in a large hall with other works of the same class. Among other works in the same room may be noted Sir F. Leighton's charming head, "Letty" (226), Mr. Holl's portrait of the Master of Charterhouse" (285); Mr. Rivière's "Actæon" (315), a study of dogs attacking a man,—the work is absurdly realistic for the title. Mr. Calderon exhibits a figure entitled "Night" (340), which suggests the idea of a portrait of Miss Anderson in Greek costume sitting on a stone seat in a garden by moonlight; the title suggests that the figure is an allegorical representation of Night, in which case she would be very unsatisfactory. Taking the title to mean merely "night-time," it is a work of considerable

expressive power, and showing very fine drawing.

The most prominent work in Gallery IV., after those we have mentioned, is Mr. F. Dicksee's "Romeo and Juliet" (430), at the moment of parting as the dawn breaks. Juliet, though wearing (as Bret Harte puts it) "that one formless garment that renders all women equal," need not have been reduced to such a poor little skimpole figure, certainly not worth climbing a balcony after. Both figures are commonplace, and quite beneath Shakspeare's conception. The effect of dawning light is well given. Equally beneath Lord Tennyson's conception is Mr. Stone's illustration, in two pictures (448, 449), of the exquisite song in "The Princess," "We fell out, my Wife and I," which we suspect was only added by way of a title after the pictures were painted. Painters should treat great poets with more reverence than thus lightly to vulgarise their conceptions. Sir F. Leighton's "Sun-gleams" (436) should not be passed over,—a brilliant, though (for the artist) a rather hard little work.

In a corner of Gallery V. is a small and powerful painting of the Impressionist school, "Fantaisie" (472), by Mr. P. W. Steer; a sketch of the head of a very remarkable-looking girl, of Southern character of face, half buried in a cloud of *tulle*. Mr. Hodgson's "Church Afloat" (484), the largest work he sends, is a scene at service on the main deck of a man-of-war; Mr. Hodgson has well given the feeling of all these rough honest faces composed to one expression of attention and seriousness during the service; it is an interesting, and what one may call a rather national kind of picture, but just comes short of its effect from a certain hardness and stiffness in the execution, as if the sailors were very good lay figures rather than living men. Mr. Ouless's "Mr. Henry Whiting" (490), is one of the most masterly portraits of the year, a little sketchy, but full of life and expression. We have not yet mentioned Mr. Linton's large work, "The Declaration of War" (498), the first of his series in the "Life of a Soldier of the Sixteenth Century," though painted the last. It is a very effective work, though a trifle theatrical; or rather the great personage who, standing on his palace steps, makes the declaration with a good deal of declamation, is theatrical, and perhaps intended to be so. The declaration is received with mock deference by the envoys of "the Ottoman" who stand at the foot of the steps; behind the prince is the young knight in armour who is to be the hero of the struggle. It is a fine work, and we hope, now that the whole are completed, some opportunity will be taken of exhibiting them publicly together. Mr. Walter Horsley's "The French in Cairo" (516), is a clever work, as also Mr. Lockhart's "Gil Blas and the Licentiate Sedillo" (528), who is as much amused with the story as his gout will allow him to be.

Gallery VI. contains another of those immense expanses of canvas covered with nothing that any one cares for, Mr. Goodall's "Flight into Egypt" (619). For the Academicians to talk about want of space when one of their number covers so many square yards of wall with this kind of thing, is too absurd. Mrs. Collier's portrait of "Miss Nettie Huxley" (592) is a hard performance, showing some very good drawing. Mr. Waller's "The Orphans" (597) is a girl feeding some fawns,—not subject enough in it. Mr. Sant has captured a couple of pairs of twin daughters, whose dual portraits hang as pendants. "Ada and Dora Ismay" (618) are very pleasing portraits, as far as faces are concerned; the dresses are painted in a rather loaded manner. A really original bit of painting, quite inexplicable in incident, is Herr Van Beers' "Soir d'Été" (650), which looks like a chapter out of a very French novel; a meadow, a park surrounded by woods, a well-appointed carriage-and-pair in the middle distance, a girl dressed in the height of fashion on a seat in the foreground, and a large headless statue which played a flute when it had a head; the footmen in the distance look at the lady, who looks at or for some one invisible: it is Delphine who has an appointment with Eugène de Rastignac. The picture is utterly heartless, and yet is of value for its piquancy and its sharp distinction from anything proper to English art. Next to it is a good portrait head of a lady, under the title "Woolgathering," by Mr. Skipworth. In a painting of the "Unconverted Cavalier" (601), Mr. C. Seton has been imitating Mr. Marks, and not without success in spirit, though his painting is rather hard. Mr. Heywood Hardy has some first-rate cavalry horses under the title "The Rear Guard" (691); he shines equally in "A Sale of Cavalry Horses" (French Cavalry) in the next room (739). Mr. Laslett J. Pott is advanced to a more conspicuous position than he has yet attained, but his "Disinherited" (693) is not so successful as some of his previous smaller works.

In Gallery VII. M. Dagnan has certainly made a hit in "Vaccination" (738). The only weak portion is the head of the woman seated in the full light of the window; but the various expressions of the mothers and the poor little children with their arms bared for the operation, and laughing with each other, and the careful compressed lips of the official surgeon as he stoops over his work, make a group full of life and reality. We pass with a silent anathema another academician's stuffed sheep, which are produced by so many square feet annually, and pause at a little work of real feeling, entitled, "Deepening Shadows" (754), by Miss Margaret Dicksee; an interior where twilight is falling, and an old man sits, with his head bowed, by the bed, where a sick child is evidently past hope of recovery: the picture is not remarkable in execution; what strikes one is its simplicity of composition and unaffected feeling. M. Bouguereau's "La Nuit" is what we should describe as a very finely-painted Academy picture; the old style of allegorical figure, representing Night, floating through the air in an elegant attitude and crape drapery. Mr. Thorburn's "Daniel in the Lion's Den" (798), of course on the line (as the work of an Associate), is almost too ludicrous to believe in. What must foreign artists think when they find a work like this well hung? And what is the effect on public taste of this kind of rubbish? The Academicians who do know what they are about had better look to this. Of some large paintings in this gallery, Mr. Val Prinsep's "Saturday Dole in Worcester Chapter House" (810) is not a happy subject, involving the representation of a number of mean-looking and ugly old women, all in the attitude of expectation; and the picture certainly is uninteresting. "A Fen Farm," by Mr. Macbeth (805), is far too large for its subject and interest; there is much canvas to let, and a tone of landscape which is not natural nor pleasing; the figure and animals are good in themselves, but as a picture it is a straggling concern.

Gallery VIII. contains little of note in addition to the works mentioned in our previous article (we are purposely passing over landscape at present), if we except Mr. Herkomer's excellent portrait of Dr. Butler, and Mr. Hugh Cameron's clever and spirited little "Rustic Interior," called "The Rivals" (859), which shows also a certain originality of style. In Gallery XI. Mr. Herkomer has it all his own way in his remarkable painting, crowded with figures, entitled "Pressing to the West" (1,546), a scene in a New York building where emigrants have to pass through for registration before "going West," and where they often remain pigged together for days in default of other lodging. Mr. Herkomer has, perhaps, done a social as well as an artistic service in depicting this wretched scene, which we presume, is from actual observation, in its painful reality. The picture shows a long boarded room, in which people of all varieties of nationality are crowded together in the extreme of discomfort. A poor sick German wife puts away with her hand the food which her husband is trying to persuade her to try; a man, who seems like a low type of Italian, looks on mechanically; a dignified, long-robed old Jew, in the centre of the picture, stands with his handsome daughter on his arm, keeping as much as he can aloof from the contamination of contact with the others; an English labouring man looks over his shoulder at the daughter. A number of other figures, more or less prominent, each tell their own tale, and add to the effect of the whole. The realism of the scene is achieved without hardness of effect, and with due regard to artistic conditions, an instructive contrast in this respect to Van Haanen's picture before alluded to, also crowded, but crowded without method or composition. The next honours of this room are carried off by Mr. Eyre Crowe, in his capital and life-like painting of the "Fish Market, Rouen" (1627); there is a sale of fish by auction; a man stands on the slab where the fish are ranged, holding one up, the fish merchant, seated behind the table, directs the sale with extended stick; his daughter (probably) and a servant make memoranda of the sale; a crowd press closely round, bidding against each other. The whole is very brightly and clearly painted, with no shirking of anything, and great variety of character in the faces. Further on a lady artist, Miss Conolly, makes a very good appearance with a work entitled "A Gap in the Ranks" (1641); and another, Miss Ida Lovering, has a good little work entitled "Motherless" (1602). Mr. Gordon's "Maria and Joseph Surface" gives a good idea of Maria; as to Joseph, one does not expect to find more than once in a generation any one who can adequately either play him or paint him. Mr. Holl's "G. Fenwick, Esq." (1656) and Mr. Calderon's "Mrs. Henry Fellows" (1620) are two excellent portraits in very opposite styles.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

MODERN BUILDING IN INDIA.—DOMES.

AT the ordinary meeting of this Institute held on Monday last, Mr. Ewan Christian, President, in the chair.

The Chairman read the following resolution which had been proposed that afternoon at a meeting of the Council:—

"Certain changes in the constitution of the Institute having been pressed on the consideration of the Council as being urgently needed, Resolved, that a Committee of the Council take into consideration the practicability of a modification of the Charter, or the grant of a new Charter, and the effect on the Institute of either course; also to confer with the Honorary Solicitor and such eminent counsel as they may think fit, and obtain such information as they may consider desirable upon the subject."

The decease of Mr. Edwin Nash, a Fellow of the Institute, of long standing, was announced.

Mr. Fowler said, that as he had some personal knowledge of Mr. Nash, he would not like that his decease, after a painful illness, should be passed without some slight notice. Mr. Nash had occupied a very considerable position in the profession, and formerly, when his health permitted, he was a constant attendant at the meetings of the Institute, taking part in the discussions to the advantage of all.

Mr. Wm. Emerson (Fellow) then read a paper entitled, "A Description of some New Buildings at Allahabad and Bhownugger, India, with some Remarks on Domes, and the mingling of Styles of Architecture." There were various points, he said, to be considered in arranging buildings suitable to Indian purposes, points with which architects were not brought into contact in England, and which involved such differences in construction as to make it a delightful experience to leave the old highways of English architectural thought, and to work for a while in India. These points were chiefly the climate, with its intense heat and its total rainfall, almost incessant, but limited to a few months; next the habits of the Oriental, which made it hard for him to work save in the accustomed grooves of his ancestors; lastly, the innovation of modern Western thought, and, it might as well be added, of science and culture, so opposed to all the antecedents of the conservative Hindoo, and to his caste prejudices. In Allahabad the average heat was from 85 degrees to 98 degrees in the shade. At Nassich, in tents under the mangoe trees, he had experienced 120° of heat. Hence the necessity for elaborate means of ventilation, for verandahs, and for walls shaded by overhanging eaves. This arrangement gave a character to Indian buildings quite unlike that of our Western ones, and afforded the architect scope for picturesque dealing with light and shade unattainable in England. With regard to the habits of the Oriental workman it was shown in detail how much the English architect has to put up with in India, how completely he must possess his soul in patience unless willing to run the risk of death by heat-apoplexy. Mr. Emerson had to allow for a considerable percentage of defective workmanship, as was illustrated by his plans for a church and for the Muir College, both at Allahabad, and for the Takhtsinggi Hospital at Bhownuggur. As to the style of architecture to be adopted by the English in our peninsular dependency, Mr. Emerson accepted, with some modification, the conclusion arrived at in Mr. Chisholm's last year's paper,*—"that an architect practising in India should unhesitatingly elect to practise in the native styles." The present reader's

* See *Builder*, vol. xliv., p. 803.

later idea was, that buildings erected under the British Raj for any purpose connected with the natives, whether for Government, education, or charity, should show a distinctively British character, at the same time adopting the details and feeling of the native architecture, and suiting it to the requirements of each particular case. In answer to the objection that this would create a hybrid style, it was asked whether the mingling of Mahommedan and Hindoo art had not resulted in some of the most enchanting buildings of the world, as exemplified at Bejapore and in the North-west Provinces. In Europe, also, were there not buildings as noble as any in the world,—for instance, St. Sophia's at Constantinople,—which were hybrid in style? Other examples were the Palermo Cathedral, San Muriato at Florence, the interior of St. Mark's at Venice, and the apse of our own Canterbury Cathedral. Indeed, were not the loveliest flowers and plants hybrids? and had not the intermingling of the different human families produced the noblest types of men? This was Mr. Emerson's apology for the architecture of the Muir College, and of the Takht-singgi Hospital, which he felt must be described as hybrid. These buildings of his carried out, as he proceeded to show at large, his idea of impressing the stamp of the British Raj on modern Indian erections. Some sketches of Indian details which he exhibited explained whence he got his inspiration. Though for the most part from Mahommedan buildings, they were, nevertheless, of Hindoo origin. That from the fort at Agra was certainly old Hindoo work re-used by the Mahommedans, and so was the column from Bejapore. One of the most interesting points to himself in these Indian works of his, Mr. Emerson said, was the chance of introducing domes,—a chance rarely falling to the lot of an architect practising in England. In the dome over the hall of the Muir College he had taken the type of the Taj Mahal for outline. Mr. Emerson proceeded to describe and compare these two domes, and gave some account of the library dome of the college and of the hospital dome. After a comprehensive survey of the principal domes in East and West, Mr. Emerson said it seemed to him that the highest perfection attainable in the construction of a dome would be a combination of the arched pendentive arrangement of Mahmoud's Tomb, surmounted by a circular dome of the conical section of Sta. Maria at Florence, or that of the tomb of the Shah Khoda Benda, with a slight additional bulbousness of the haunches, and a weighty cornice hung inside about one-third of the height above the springing. Part of this idea was in his mind when he designed the dome over the Sitzungsaal in the competition for the Berlin Houses of Parliament. In this case he proposed supporting the large lantern by flying buttresses, over the dome, rather than by a double shell. One good point of this construction internally would be that the spandrels would offer such advantages for mosaics or fresco, being at an easy angle of vision,—an important thing at a great height. He believed that with Portland cement concrete and a network of galvanised iron or copper embedded in it, to supply the fibre lacking to concrete, the upper part being composed of an aggregate of light specific gravity, with heavy material at the base, we might construct perfectly stable domes of larger size than any ever yet built, of more effective external and internal design, and of comparatively light weight. Internally, the dome was by far the grandest and most impressive method of covering a large area. There was a mystery about the gloom of the interior of a vast cupola that well suited the imagination of an Oriental. And in all great architecture there should be a certain mysteriousness. He had read that a science without mystery is unknown, and that a religion without mystery was absurd. He felt sure they might add that architecture without an element of mystery is unpoetical and unimpressive. It was this quality in our great Gothic cathedrals, caused by the ranges of columns, arches, and vaults that was the chief reason of their attractiveness, but they lacked the feeling of immensity and spaciousness given by the dome. Yet a dome should not be too light, nor its vastness too easily penetrated. He thought the effect of St. Peter's was marred by this. The interior of St. Paul's was on this score more effective. Some would ask, How about the decoration? Well, the decoration of St. Peter's was too plainly visible, and if St. Paul's should be treated correctly by means of well-designed subjects with strong outlines, devoid of dark shadows and rendered in the brightest glass mosaic, it would be quite visible enough down below, with enough of the mystery emblematical of all spiritual and heavenly things. But for decoration in such a position the colours must be brilliant, for the joint effect of distance and the atmosphere would be to dull an emerald green down to grey, and a bright vermilion to dingy red. Mr. Emerson mentioned that he often wondered why our architects who had had the chance had never erected a dome in connexion with a Gothic Church in England. It was not needless, as was proved by our enormous congregations, many of whom could neither see nor hear on account of the blocking up of the lungs of the churches with the enormous piers. He wanted to see a magnificent Gothic interior opened up after the manner of the Duomo at Florence, and numbers of other Italian churches. But he could not see why the grandest of all features should be almost exclusively found in Classic and Orientsl work. There might be certain difficulties to be overcome, but nothing insurmountable, and with the earlier types of Transitional architecture, the dome would perfectly harmonise. Might it not happen that in such an endeavour to blend Classic and Gothic we might strike the architecture of thirty years hence, as hinted by Professor Kerr in his interesting paper read at the recent Conference of Architects.* Let it be a Renaissance suited in every way to our modern requirements, not such as Italy saw in the fifteenth or sixteenth century, but a Renaissance of the mingled spirit of Classic and Gothic exemplified in some such works of an earlier century as he had already mentioned. The desiderated Renaissance was one with arms long enough and bold enough to embrace the lintel, the round arch, and the pointed arch, the picturesqueness of the Gothic vault, and the dignified nobility of the Classic and Oriental dome, with an elimination of the crudities of Gothic art, and an enrichment with the graces of the Classic style. Before such an architecture a style which worshipped nothing but quaintness, whose ideal of nobility was only the picturesque, and whose detail and sculpture were debased and meaningless, might surely vanish into the haze of oblivion from which it was evolved. But he did not yearn after a Renaissance whose constructive element was iron. That might suffice for bridges of thousands of feet span, for earthquake-proof buildings, for fireproof roofs and floors, for girders, ties, and cement. An architecture to be noble and impressive must not be wanting in mass, and an iron edifice was but a skeleton wanting the clothing of flesh and skin to give it life and beauty. We called that a human skeleton from which the soul had fled, and on the same principle an iron architecture would be found to lack the nobility of a living art.

Of the discussion which followed the reading of the paper we will give a special report in our next.

* See *Builder*, p. 726, *ante*.

REGENT-STREET BRANCH OF THE ALLIANCE BANK, LIMITED.

THE directors of the Alliance Bank having determined to open a West-end branch, acquired premises at the corner of Princes-street, Regent-street, which,—with the consent of the Office of Woods and Forests,—were pulled down and the present building erected from the designs, and under the superintendence of the architect to the bank, Mr. Fred. Pinches, 5, John-street, Adelphi, W.C. The ground-floor is principally devoted to the banking office, which is entered from a doorway at the angle of the building. The manager's room opens out of the banking room, and is divided from it by a glazed wainscot screen. The whole of the fittings, entrance doors, lobbies, &c., are in wainscot dead polished, the public space in front of the counter being laid with mosaic. At the rear of the manager's room is the stone staircase to the basement, and also the hydraulic lift for the bullion, plate-chests, &c.

Great care has been taken in the construction of the basement, which contains two strong rooms, the thick walls of which are lined with Bessemer steel plating, and have strong iron doors and gates of the most approved description, made by Messrs. Hobbs, Hart, & Co. In this floor are placed the heating-chamber, lavatory, water-closets, &c. The entire area of the ground-floor is of fireproof construction.

The private entrance to the manager's residence is placed in Princes-street, and leads through an entrance-hall to the principal staircase. On the first-floor are the dining and drawing rooms, on the second and third floors the bedrooms, the kitchen scullery, servants' bedroom, &c., being placed on the top floor.

The frontages in Regent-street and Princes-street are executed in Portland stone. The works have been carried out expeditiously and satisfactorily by Messrs. Lucas Bros., and were opened for business on the 3rd of March last.

RECEIVING-HOUSE AND CASUAL WARDS FOR THE ST. GEORGE'S UNION.

THE Workhouses belonging to the St. George's, Hanover-square, Board of Guardians (until lately situated in the aristocratic neighbourhood of Mount-street, Grosvenor-square, and Victoria-street, Westminster), having, within the last two years, been removed to the new buildings erected in the Fulham-road, it became necessary to provide in some central spot of the Union a house where applicants for admission to the Workhouse could be first seen, and examined as to their fitness for admission. It was also thought that the casual wards should be located in a spot more central than at present to the districts comprised in the Union. Thus it is that the building illustrated by us this week comes to be erected. It provides accommodation in the front building, on the ground and first floor, for the reception of sixty casuals, each of whom is accommodated with a separate apartment or cell. The third floor is fitted up as sick wards for twelve patients of each sex, and these, being designed upon the latest principles advocated by hospital experts, will be especially worth a visit from those interested in such matters.

The central portion of the ground-floor of this front block contains the entrance-hall, with master's and porter's office, and, adjoining it, a committee-room and waiting-room for applicants for out-door relief.

The buildings in the central block contain accommodation for fourteen paupers of each sex, and there are two padded rooms for dangerous lunatics. A small number of paupers will thus always be kept at the buildings and will be employed about the premises performing the usual cleaning and such like duties.

The buildings in the rear consist of a kitchen, with larders and stores, a laundry, disinfecting closet, and other offices.

Stabling, with large ambulance accommodation, is provided at one end of the site left of the entrance.

The architects are Messrs. Saxon Snell & Sons; the builders are Messrs. Mowlem & Co. The heating works are executed by Messrs. Berry & Son; the water supply by Messrs. Potter & Sons; the cooking apparatus by Messrs. Benham & Sons; the gasfittings by Messrs. May Brothers; the padded rooms by Messrs. Cooper & Holt; and the stable fittings by Messrs. Barton & Co.

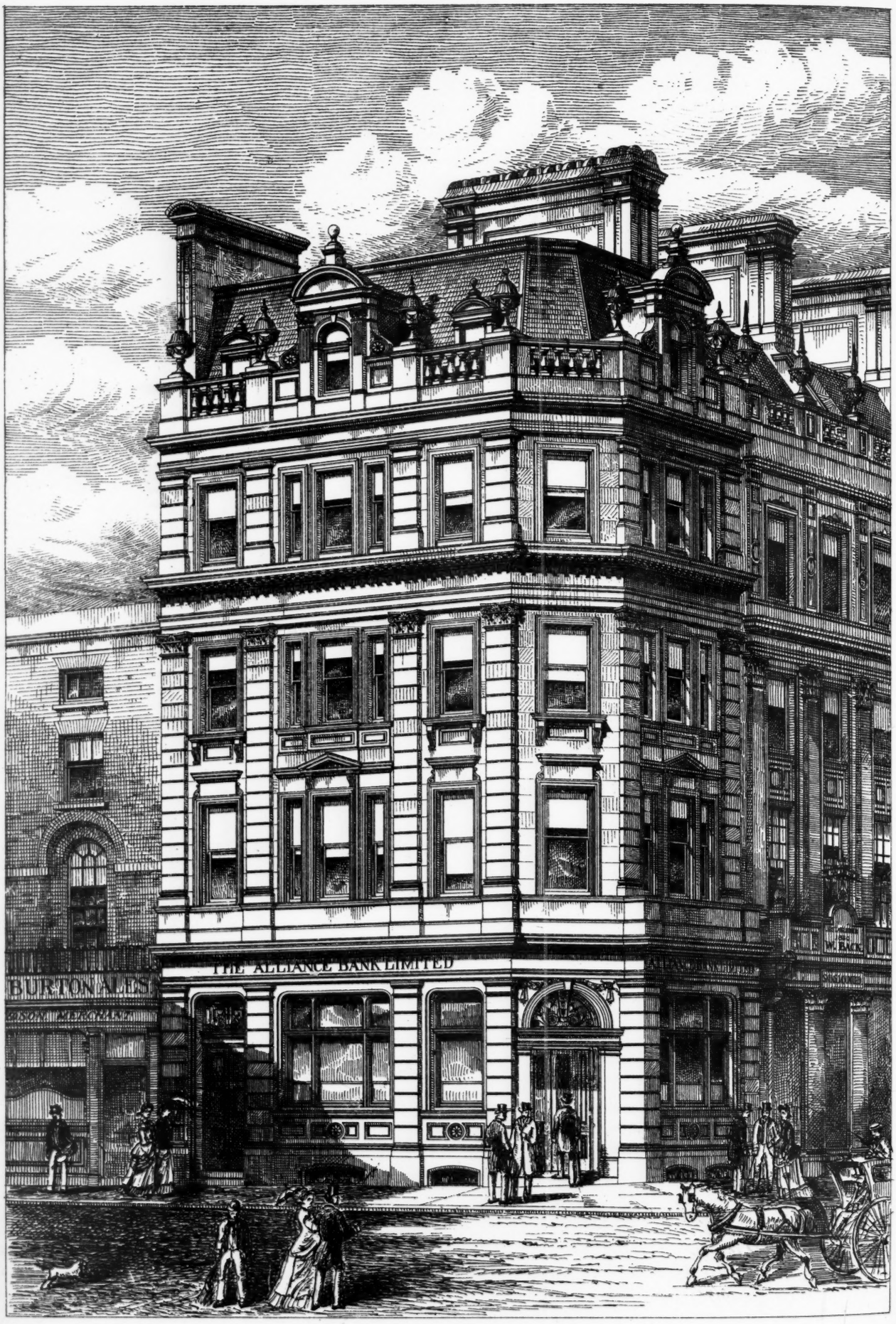
The contract for the erection of the buildings, including engineering work and all fittings, amounts to 20,900*l*.

GATES, WIRRAL CHILDREN'S HOSPITAL, BIRKENHEAD.

THESE gates are constructed of wrought-iron, with the exception of the flowers and letters W. C. H., which are in real bronze. The workmanship is exceedingly good, and the design has been most faithfully carried out. They were the gift of Mrs. Dowie, of Claughton, in memory of her husband, and were executed by Messrs. Bennett Bros., of Liverpool.

Mr. John Clarke, 19, Castle-street, Liverpool, was the architect of the building, and the gates were carried out under his immediate superintendence.

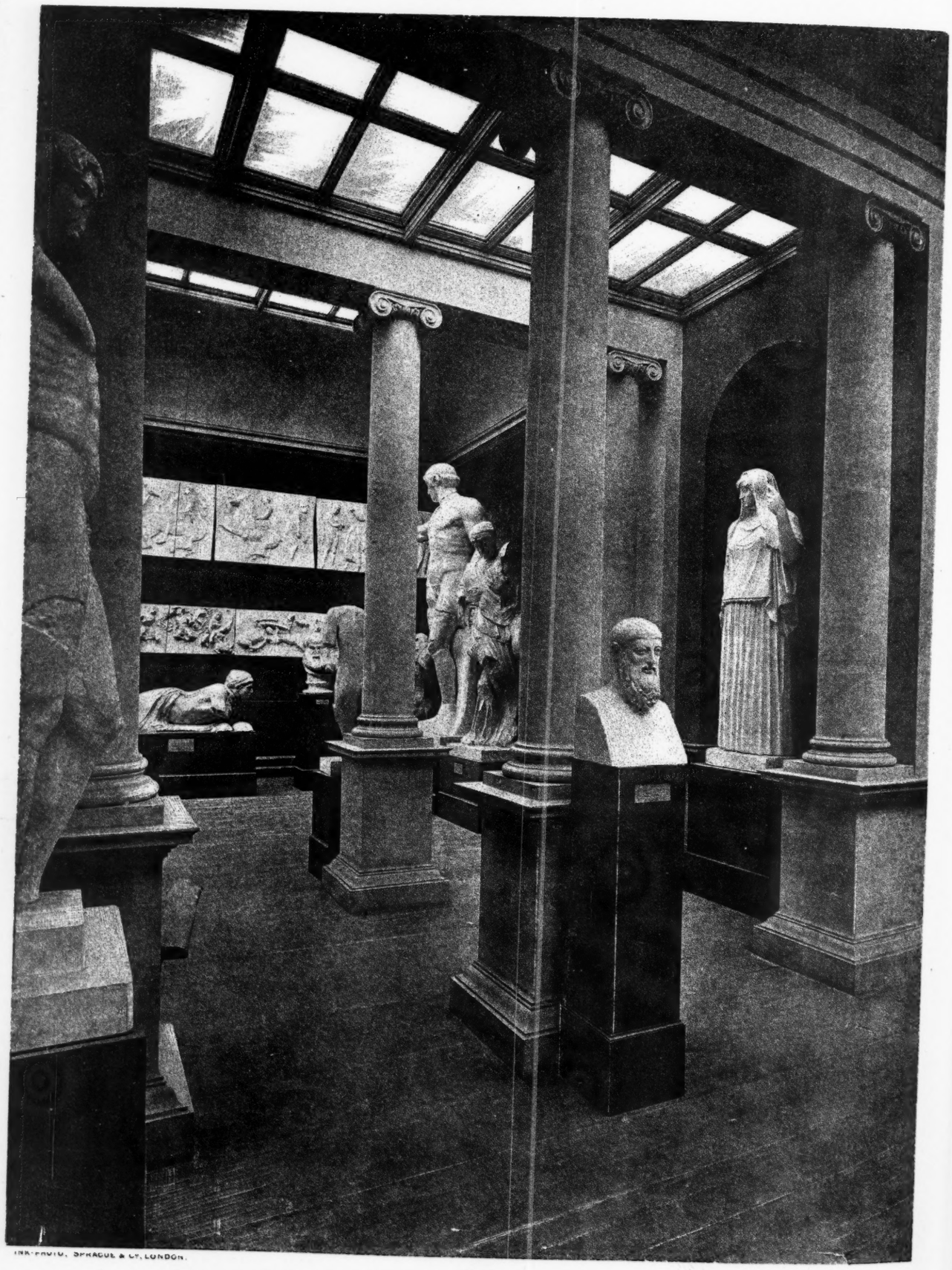
Temple of Diana at Ephesus.—In reference to the remarks on this in our last (p. 692), Mr. Jas. Fergusson writes to say that it would have been impossible to give data, references, and explanations on the drawing, and that his paper in the Transactions of the Institute of Architects, vol. for 1882-3, pp. 147 to 161, must be taken as the data for the design, which is practically the outcome of the paper.



C.F Kell Photo-Lith & Printer 8 Castle St Holborn London E.C.

THE ALLIANCE BANK, REGENT STREET.

MR. FREDERICK PINCHES, A.R.I.B.A.
Architect.



INN: PHOTO. SPRAGUE & Cº. LONDON.

NEW MUSEUM OF ANTIQUE SCULPTURE, CAMBRIDGE.

I.—*View from centre Gallery, looking into Early Greek Gallery.*

"INK-PHOTO", SPRAGUE & CO., LONDON.

NEW MUSEUM OF ANTIQUE SCULPTURE, CAMBRIDGE.

II.—*View across the Galleries, from the Early Greek Room.*

"INK-PHOTO", SPRAGUE & Cº. LONDON.

NEW MUSEUM OF ANTIQUE SCULPTURE, CAMBRIDGE.

III.—*Upper portion of centre Gallery (later Greek Work).*

CARVED OAK DOOR-HEAD, FOR BILLIARD-ROOM, WORTLEY HALL.

(Executed at the School of Art Wood-Carving, Kensington).

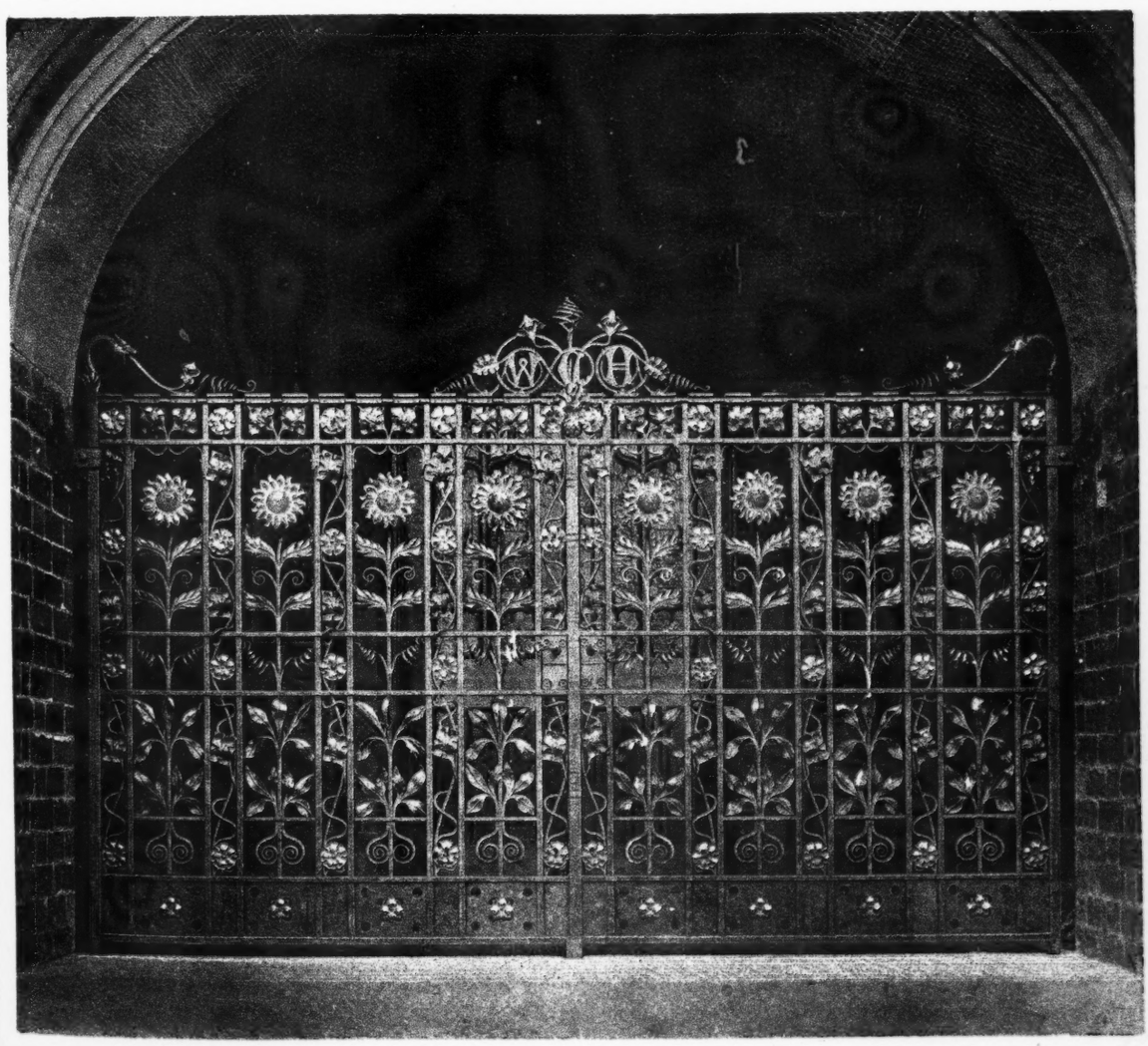
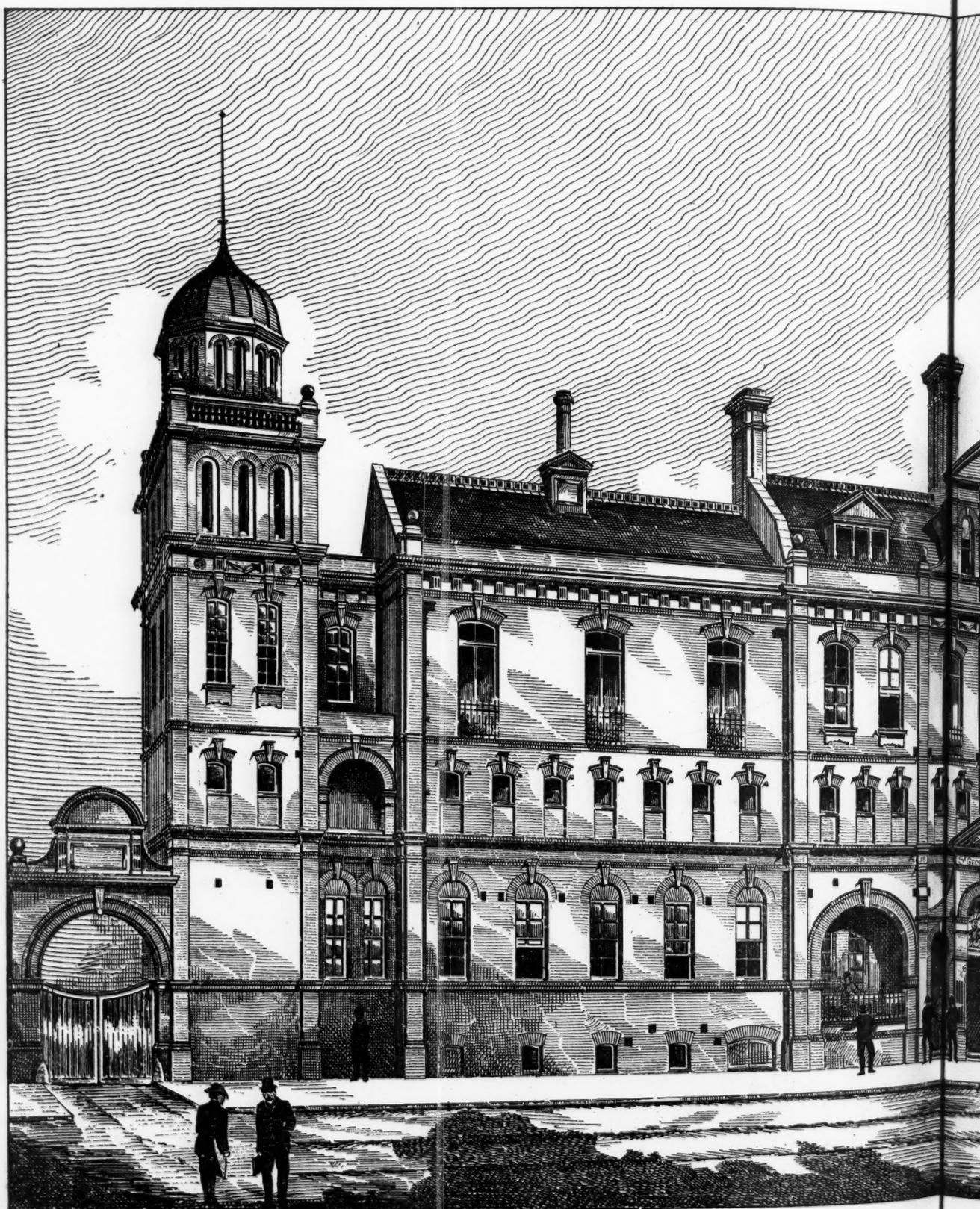


PHOTO-GRAVURE BY SPRAGUE & Co. LONDON.

WROUGHT-IRON GATES, WIRRAL CHILDREN'S HOSPITAL, BIRKENHEAD.

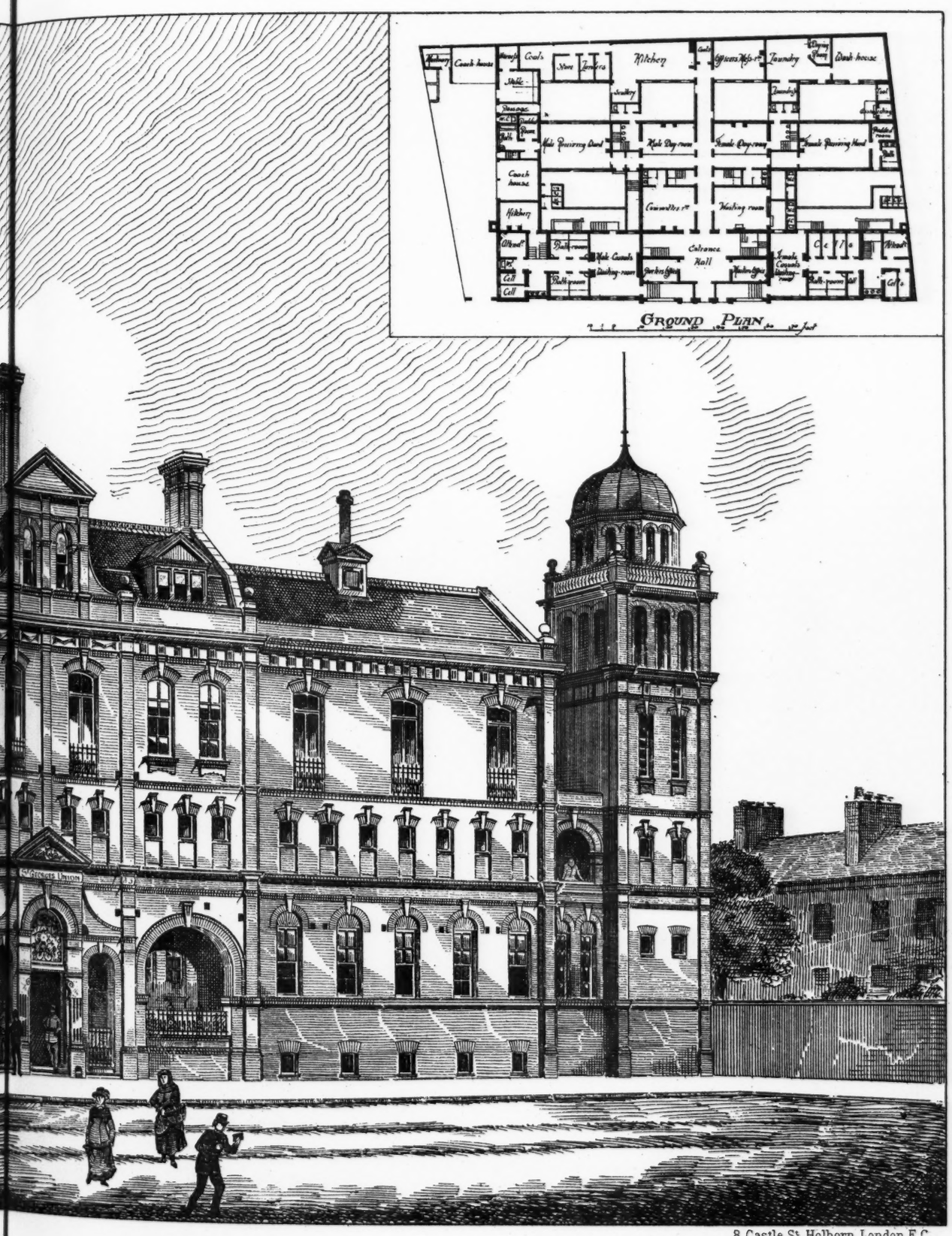
Mr. John Clarke, Architect.



C. F. Kell Photo-Lith & Printer.

RECEIVING HOUSE AND CASUAL WAR

For the Guardians of the Poor o



8, Castle St Holborn, London, E.C.

WARDS, WALLIS' YARD, PIMLICO,

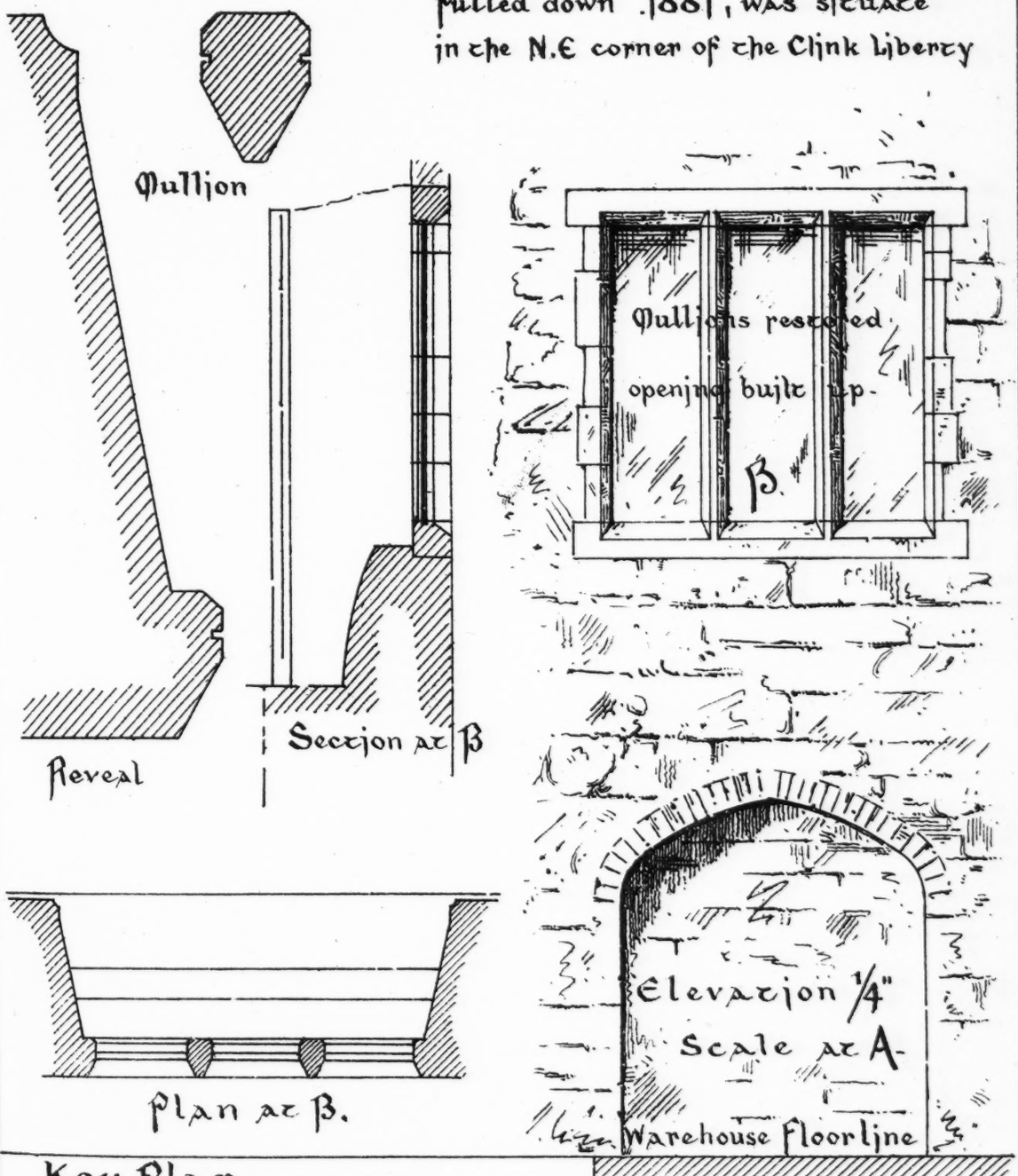
Poor of St. George's Union.

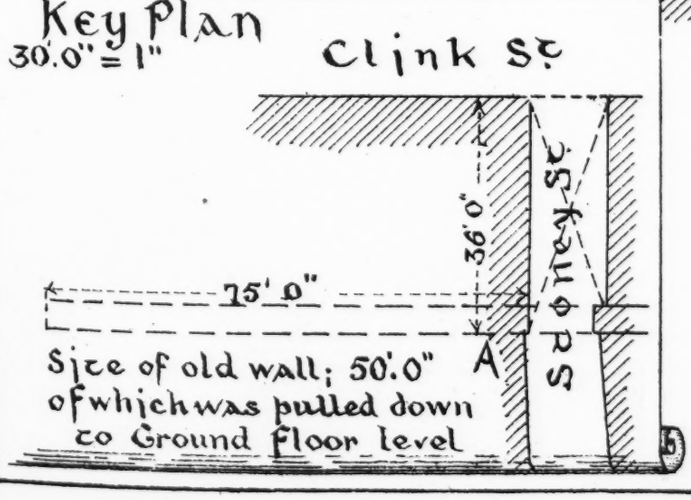
MESSRS. H. SAXON SNELL & SON, ARCHITECTS.

Details 1" scale

Remains of Winchester Palace

Pulled down 1881; was situate in the N.E corner of the Clink Liberty





DRAWN BY
C. N. Mc INTYRE NORTH,
ARCHITECT & SURVEYOR,
15, Boro High Street.
S.E.

C. F. Kell Photo-Lith & Printer, 8, Castle St. Holborn, London, E.C.

THE NEW MUSEUM OF SCULPTURE, CAMBRIDGE.

THE three views which we give of the interior of this museum derive their chief interest from the sculpture, which is fully treated of in our leading article of this week; but the points of view have been selected so as to include also such points of architectural effect as could be realised in a building in which economy was a necessary condition. As described in our former article,* the sculpture rooms form three parallel galleries, the centre one running the whole length of the building, the other two shorter. Plate I. is from the middle portion of the centre gallery, looking through the little columned vestibule which connects it with the right hand gallery. Plate II. gives the view from near the middle of the right hand gallery, looking across the building, through the two doors of inter-communication, towards the Roman room. Plate III. is from nearly the same position as Plate I., but looking up the centre gallery, to where a columned apse closes the *vista*.

CARVED OAK DOOR-HEAD, WORTLEY HALL.

EXECUTED BY STUDENTS OF THE SCHOOL OF ART WOOD-CARVING, KENSINGTON.

THE students of the School of Art Wood-carving, at the Albert Hall, have just finished two carved lunettes in oak for the architraves or overdoors of Lord Wharncliffe's billiard-room at Wortley Hall, one of which we illustrate in this number. The panels were designed by Mr. John Fisher, of the National Art-Training School, and late of the Sheffield School of Art, and were approved by Mr. E. J. Poynter, R.A., who designed the rest of the decoration (See *Builder*, Jan. 5th). The designs have been carried out in the wood by Miss M. E. Reeks, Miss H. E. Wahab, Mr. J. Fourneaux, and Mr. G. Hurst.

We may add that the principal aim of this school is to cultivate the taste for wood-carving, and to produce it at a moderate cost, and as the committee are anxious to revive the architectural wood-carving so prevalent in the eighteenth century in England, the School would gladly co-operate with any architect for this purpose. The School is open to amateurs as well as to those making wood-carving a profession, and to ladies as well as gentlemen.

REMAINS OF WINCHESTER PALACE.

IN Mr. Brewer's view of Old London Bridge, which we published a fortnight since, Winchester Palace formed a prominent object in the foreground. We now reproduce a drawing of a fragment of the palace which still remained two or three years ago,—the detail of a window and archway, which were discovered in pulling down a portion of the old walling of the palace. The wall had for many years formed the party-wall between Mr. E. Gripper's mills and a shed on the southward, and in consequence of the necessity of rebuilding the greater portion of the wall had to be taken down to the level of the warehouse floor.

The portion of the wall, as shown on the key-plan (in length, 75 ft.), was situate on the west of Stoney-street, and 36 ft. from Clink-street. The jamb, head, and cill of the window were in a fair state of preservation, but portions of the mullions only remained. Westward of the remains shown in the illustration were another four-centred archway and some stones which had evidently formed part of a doorway.

In digging for the foundation of the piers of the new wall, which was built in the old foundation, the crown of a sewer or subway was broken into, which, to all appearance, was much of the same size and character as that still (or until lately) to be seen near some houses in the Borough Market; this subway, however, being full of semi-liquid mud, its extent and direction could not be ascertained. Embedded in the wall, at the first-floor level, was a handful of Samian ware, which had evidently been broken up and thrown in during the building of the wall. This illustration is one of a series of sketches and notes of objects of interest in Southwark and Rochester, made and collected by Mr. C. N. McIntyre North during the last four-and-twenty years.

* *Builder*, December 1, 1883.

THE ARCHITECTURAL ASSOCIATION.

VISIT TO NO. 2, KENSINGTON COURT.

THE members of the Architectural Association made their ninth and last Saturday afternoon visit this session, on the 17th inst., to No. 2, Kensington Court. Peter Cunningham says,—"Kensington, a village, a mile and a half from Hyde Park Corner." In front of the house visited last Saturday stands the milestone recording this fact. The house is situated in the High-street, and immediately opposite Kensington Palace. It is erected on a freehold plot of ground, having a frontage of 26 ft. 6 in. by a depth of 100 ft., at the junction of the new roadway to the Kensington Court Estate. Our readers will remember that the Association visited other houses on this estate recently, as recorded in the *Builder* of the 26th ult. No. 2, Kensington Court is a house of somewhat larger dimensions, and is being erected for Mr. A. Riley, of 32, Queen's-gardens, Hyde Park, from designs and under the superintendence of Mr. T. Graham Jackson, M.A., architect, at a cost of 7,800*l*. Mr. A. Estcourt, of Gloucester, is the contractor, and Mr. R. Edwards is the clerk of the works, by whom the visitors were received. After inspecting the drawings, the members, who were headed by Mr. Cole A. Adams, the President, and Mr. H. D. Appleton, one of the honorary secretaries, proceeded to view the house. Mr. Edwards said it was commenced in March, 1883, and is to be completed in three months from this date.

Besides the basement the house contains five stories, including an attic. In the basement are the servants' hall, housekeeper's room, butler's pantry, kitchen, scullery, and four large coal-vaults under pavement. The basement occupies the whole of the site. The ground floor consists of the library, dining-room, study, oratory, and entrance-hall. The first floor contains the drawing-room, large sitting-room, principal bedroom, and a spacious landing on the stairs overlooking a covered balcony on the western side. The upper floors contain bedrooms, bath-rooms, closets, &c. The treads, risers, ornamental balusters and handrail of the principal staircase from ground to second floor are constructed of oak; the upper flights are in painted deal, with turned balusters and polished oak rail. There is also a stone staircase from basement to the second floor. The front elevations are built of red brick facings and terra-cotta dressings, with Portland stone dressings for all gable and wall copings, finials and corbels. The balcony landings are from Castle Hill, Scotland. Messrs. Doulton, of Lambeth, supplied the terra-cotta dressings; and Messrs. Farmer & Brindley executed the whole of the modelling for the terra-cotta enrichments, and this firm has also completed all the carved work in oak and deal throughout. Oak wainscoting is used in the drawing and dining-rooms; the oak chimney-pieces in these rooms are of good design. The other principal rooms, including the study and the sitting-room on the second floor, will have deal wainscoting and chimney-pieces of good design, all to be painted. Our observations as to the sanitary arrangements and drainage of this estate, as described in the *Builder* of the 26th ult. also apply to this house, it being drained into the new sewer beneath the subway on the estate. *Apropos* of subways a fresh and powerful argument has recently arisen in this parish for extending their system, caused through the action just concluded in the Court of Queen's Bench,—the "Gaslight and Coke Company *v.* St. Mary Abbott's Kensington."

NO. 1, KENSINGTON-COURT.

The members, conducted by their president and hon. secretary, subsequently visited this house, where they were received by Mr. William McGill, clerk of the works, and Mr. Joseph Moth, foreman to Messrs. Holland & Hannen, the contractors. The house and premises contain twice the area of No. 2 (the one just described), the plot of land having a frontage to the high street of 53 ft. 6 in. by a depth of 100 ft., and was originally intended for two houses, but was purchased by Mrs. Lucena, who has thereon erected one large house from designs by Mr. J. J. Stevenson, architect. The ground-floor has a dining-room 24 ft. by 20 ft.; library 20 ft. by 12 ft. 9 in.; morning-room, lavatory, and conveniences. To the rear is a coach-house and stabling for six horses, with coachman's rooms and lofts over. The arrangements in the basement are similar to those described in the adjoining house. The first-floor contains a large drawing-room 33 ft. 6 in. by 20 ft., boudoir 20 ft. by 16 ft. 6 in., and principal bed-room and dressing-room. On the second, third, and attic floors are bed-rooms, &c. Over the morning-room, &c., on a mezzanine floor is a fine billiard-room, 27 ft. by 19 ft., lighted from the top by a lantern skylight and by a large bay window. The principal roof timbers are exposed, and are of a dark-stained deal. All the lead lights throughout are manufactured and supplied by the contractors, Messrs. Holland & Hannen.

The whole of the woodwork to the principal staircase is of pitch-pine, with mahogany hand-rail. There is also a stone staircase from basement to the second-floor. The flooring to the entrance-hall, drawing-room, and boudoir are executed in parquetry by Mr. James F. Ebner, of Clerkenwell-road. The flooring in the other rooms on the ground and first floors is executed in pitch-pine. The elevation has red brick facings and terra-cotta dressings. This house is drained into a sewer specially constructed in the High-street at the cost of Mrs. Lucena. Both these houses may be said to be of the free Classic or Queen Anne style, modernised.

BUILDERS' BENEVOLENT INSTITUTION.

AN election of four pensioners on the funds of this institution was held at Willis's Rooms, St. James's, on Thursday last, Mr. Henry G. Smith, president, in the chair. There were eleven candidates for the four vacancies—viz., nine men and two women. The poll was open from two to four p.m. The scrutineers, Messrs. Thomas Stirling and T. F. Rider, announced the results of the polling to be as follow, viz.:—William Mansell (fourth application), 753 votes; William Voysey (third application), 837; William Humphrey (third application), 534; Matthew Harrison (second application), 164; Thomas T. Spradbury (second application), 826; John R. Bisley, 35; George Shearing, 487; Reuben Hurren, 163; William Charles Allen, 699 (including 45 votes given to the candidate in respect of contributions to the funds of the Institution in the days of his prosperity); Lilias Greig (second application), 1,010; and Harriet Shapland, 53. The successful candidates were therefore declared to be William Mansell, William Voysey, T. T. Spradbury, and Lilias Greig. Among the friends of the Institution, other than those already named, who took part in the proceedings, were Messrs. T. G. Smith, F. Foxley, G. N. Watts, and — Bussell. A vote of thanks to the chairman terminated the proceedings.

SURVEYORSHIP ITEMS.

Aberdeen.—One hundred and twenty applications were lodged for the appointment of Assistant Burgh Surveyor. The list of applicants was reduced by the Council's Finance committee, who examined the applications, to the following six gentlemen, viz., Messrs. James Bartie, of Selkirk; William Dyack, of Aberdeen; G. S. Hird, of Aberdeen; John Keith, of Leicester; Kenneth McRae, of Edinburgh; and Samuel Stead, of Bradford. At a meeting of the Town Council, held on the 19th inst., Mr. William Dyack was appointed to the vacant office. The salary is 200*l*. per annum.

Bethnal Green.—At a meeting of the Bethnal Green Vestry held on the 15th inst., Mr. Frederick William Barratt, Assistant Surveyor to the Board of Works for the Hackney District, was appointed Surveyor to the Vestry of Bethnal Green.

New Public Offices for Widnes.—The Widnes Local Board have (according to the *Liverpool Courier*) made a final selection from the sixteen designs sent in for the new public-offices. They offered premiums of 50*l*., 30*l*., and 20*l*. respectively for the three best designs, and architects from all parts of the country competed. The offices, which are to be built on the market-ground at a present expenditure of 3,000*l*., are to be made into a town-hall at some future period, and it was made a condition of the competition that the carrying out of this proposed enlargement or development should be provided for. The first premium has been awarded to Messrs. F. & G. Holme, Liverpool; the second premium went to Mr. Henry Shelmerdine, also of Liverpool; and the third to Mr. J. Cundale, of Leamington. The successful designs are to remain open for inspection by the public for a week in the board-room, Alfordestreet.

PUBLIC ARCHITECTURAL COMPETITIONS.

WE have been requested to publish the following list of 1,385 architects who have signed an agreement, in accordance with the suggestion recently made in a memorial addressed to the President and Council of the Royal Institute of British Architects, on May 24th, 1880, pledging themselves *not* to take part in any public architectural competitions unless one or more professional assessors of established reputation are appointed to advise the promoters on the relative merits of the designs submitted in the competition:—

Abbott, John O.
Adams, Cole A.
Adams, John G.
Adams, M. B.
Addie, John
Addie, —
Adye, C. S.
Aitchison, A.
Aitchison, G.
Aittlen, G. S.
Aldridge, C.
Aldwinckle, T. W.
Alexander, J.
Alexander, J. W.
Allan, John
Allen, Theo.
Anderson, J. M.
Anderson, R. R.
André, J. L.
Andrews, T.
Andrews, R. T.
Ansell, W. R.
Anthony, A. E.
Appleton, H. D.
Archer, T. S.
Argile, R.
Armour, J., jun.
Armstrong, C. F.
Arpin, J. E.
Arthur, G.
Ashworth, E.
Atkinson, J. A.
Attwater, A. H.
Audsley, G. A.
Austin, H. J.
Bach, E. H.
Bacon, H. F.
Badcock, J. B.
Baggalay, F. T.
Bailey, H. G.
Baily, Charles
Baker, Arthur
Baker, Charles
Baker, A. J.
Baker, W. L.
Ball, J. L.
Ballard, W. W.
Balmer, P.
Barber, S. J.
Barber, W. S.
Bare, H. B.
Bargman, F.
Barker, J.
Barker, T. G.
Barker, E. H. L.
Barlow, A. J.
Barnes, F.
Barry, Charles
Barry, T. W.
Barwick, W. S.
Bateman, J. J.
Bath, Fred.
Batley, J. T.
Batt, W., jun.
Batterbury, T.
Baxandall, J. W.
Bayly, J. P.
Beardmore, J.
Beater, G. P.
Beck, George
Beck, C. S.
Beckett, T. G.
Beckett, H. F. S.
Bedborough, A.
Belcher, J.
Bell, W., Manchester
Bell, W. Darlington
Bell, Asahel P.
Bell, E. Ingress
Bennett, R. C.
Bennett, R. J.
Benson, B.
Benson, Chas.
Benson, B. G.
Benstead, J. R.
Bensted, H.
Bentley, A.
Bentley, C. J.
Bentley, J. F.
Berry, W. H. A.
Bertwistle, J.
Best, Robert W.
Bibby, G. H.
Bilton, J. C.
Bintley, Joseph
Birch, John
Bird, James
Bisset, C. J.
Black, Ernest
Black, Robt.
Blacka, J. R.
Blackadder, R.
Blackburne, E. L.
Blake, E. C. H.
Blanc, H. J.
Bland, J. Geo.
Bland, J. J. B.
Blashill, T.
Blatchley, E. R.
Blease, C. W.
Blomfield, A. W.
Bluck, R. S.
Boardman, E.
Boden, W. M.
Bolton, Young
Bonner, H. T.
Booker, R.
Booker, W. H.
Booth, Lawrence
Booth, A. C. B.
Boulnois, W. A.
Bourchier, E. H.
Bovill, Alfred
Bower, W. G.
Bowyer, W. J.
Boyes, H. C.
Boyle, Robt.
Boys, John C.
Brace, H. G.
Bradbury, G.
Brade, Daniel
Bradfield, H.
Brakspear, W. H.
Brandon, D.
Brattan, Jos.
Brattan, Joseph
Brenan, G. W.
Brereton, F. S.
Bressey, J. T.
Brice, John
Bridgford, H.
Bridgford, T. H.
Bromley, A. N.
Brook, J. W.
Brooking, E. W.
Brooks, James
Brooks, Samuel
Brown, Wm.
Brown, T. A.
Brown, W. A.
Brown, W. T.
Browne, C.
Browne, T.
Browne, G. W.
Browne, J. J. F.
Bruce, J. L.
Brunsden, A.
Bruton, E. G.
Bryce, John
Bryden, R. A.
Bryden, W. R.
Brydon, J. McK.
Buck, William
Buck, J. M.
Buckle, J. G.
Buckler, C. A.
Bulmer, G. B.
Bunting, G.
Burn, G. A.
Burnell, A. B.
Burnell, E. H.
Burnell, H. H.
Burnet, John
Burnet, J. J.
Burr, Alfred
Burr, G. F.
Burton, W. S.
Bury, S. J.
Butler, John
Butler, J. D.
Byrne, P. J.
Cackett, J. T.
Cadney, C. L.
Caiger, F. H.
Caine, C. Q.
Calvert, E.
Calvert, R.
Campbell, D.
Campion, C. W.
Capes, Alfred
Capes, S. C.
Carey, J. G.
Carôe, W. D.
Carpenter, R. H.
Carr, Martin
Carroll, Wm., jun.
Carter, J. B.
Carter, W. A.
Carver, John
Cates, Arthur
Caws, Frank
Cawston, A.
Cecil, E. D.
Chadwick, T.
Chalmers, James
Chalmers, John
Chapman, C. W.
Charlewood, H. C.
Cheiake, Wm.
Cheston, Horace
Chisholm, R. F.
Chorley, C. R.
Christian, J. H.
Christopher, J. T.
Christy, W. J.
Church, W. D.
Clark, Edward
Clark, James
Clark, John
Clark, J. H.
Clarke, W. H.
Clarke, Somers
Clarke, H. F.
Clarke, Joseph
Clarke, T. Charles
Clarke, W. W. K.
Clarkson, J.
Clarkson, S. F.
Clayton, C. E.
Clemence, J. L.
Clesham, E. E.
Clifford, H. E.
Clissold, W.
Coad, Richard
Cobb, W. H.
Cobham, G. R.
Cochrane, R.
Codd, John
Coldwell, W. G.
Cole, William
Cole, John J.
Collcutt, T. E.
Collier, R. M.
Collier, R. W.
Colling, J. K.
Collins, F. H.
Colpoys, A. A. G.
Colson, John
Colson, James H.
Colson, John B.
Colyer, Fredk.
Commin, F. J.
Conder, Alfred
Cook, Thomas
Cook, Tom
Cook, A. Stanton
Cook, J. Oliver
Cooke, W. George
Cooper, } Reading
Cooper, }
Cooper, Henry
Cooper, A. L.
Cooper, H. A.
Corbett, W. E.
Corby, J. B.
Corson, G.
Cory, John A.
Cossins, J. A.
Cottam, A. B.
Cotton, John
Couldrey, W. G.
Coulson, R.
Courtis, G. H.
Coward, F. G.
Cowper, P.
Cox, R. E.
Cox, R. Lockyer
Cox, W. Sidney
Creed, Richard
Crickmay, G. L.
Crickmay, G. R.
Crisford, A.
Crisp, W.
Crocker, James
Crofts, J. N.
Crompton, E. S.
Crompton, W. H.
Cronk, E. E.
Cross, John
Cross, Alfred W.
Crosse, Edward
Crossland, R. E.
Crowcroft, —
Cubitt, James
Cule, Moses
Cullen, A.
Currey, Henry
Currey, Percival
Curry, John H.
Curwen, Robert
Curzon, Henry
Cuthbert, G.
Cutler, T. W.
Cutts, J. E. K.
Dale, Daniel R.
Dalgleish, C. R.
Dalgl sh, R.
Darbishire, H. A.
Dashwood, T.
Davidson, John
Davidson, S. D.
Davie, W. Galsworthy
Davies, Fredk.
Davies, Richard
Davies, Samuel
Davies, Walter
Davies, John B.
Davies, John H.
Davies, R. C.
Davies-Colley, A. H.
Davis, Alfred
Davis, F. W.
Davis, J. S.
Davis, O. W.
Davy, R. C.
Dawson, Henry
Dawson, C. J.
Day, John
Deacon, C. E.
Deakin, A. B.
Delfosse, C. S.
Demaine, Jas.
Dennie, W. L.
De Ville, Louis
Dibble, F. J.
Dodd, J. S.
Dolby, Edwin
Dollar, Peter
Dollman, F. T.
Donnelly, T. R.
Douglas, C.
Douglas, John
Doyley, James
Down, E. R.
Drake, John
Drew, W.
Drinkwater, H. G. W.
Drury, David
Drury, Michael
Drury, Ed. Dru.
Duffield, W. H.
Duke, R. R.
Dunn, Archibald
Dunn, John
Dunnage, G. A.
Durrans, T.
Dyball, Sextus
Eales, Fred. E.
Earle, J. P.
Eaton, John
Ebbetts, W. J.
Edmeston, J.
Edmonds, A. H.
Edward, —
Edwards, A.
Edwards, G.
Edwards, Owen
Edwards, R. C.
Edwards, F. R. L.
Eggar, J. A.
Elborne, H. G.
Elgar, E. L.
Ellerton, M. K.
Elliff, Frederick
Ellis, George
Ellis, E. B.
Ellis, T. M.
Ellison, A. T.
Elsam, R. T.
Elson, Benjamin
Elworthy, T.
Emden, W.
Emerson, William
Essex, Oliver
Evans, C. E.
Evans, H.
Evans, R.
Evers, John
Evers, George
Evill, Walter
Evins, J. H.
Ewart, J.
Fagg, George
Farrall, Thomas
Farrall, C. E.
Farrar, James
Farrer, Thomas
Fawcett, Jos.
Fawcett, W. M.
Fear, J. F.
Fell, George
Ferguson, J. M.
Ferrey, B. E.
Field, W. C.
Firmin, W. R.
Flemming, R.
Fletcher, John
Fletcher, W. J.
Flewett, T. O.
Flint, Henry
Florence, H. L.
Foggie, James
Forster, R. C.
Foster, —
Fowler, Charles
Fowler, James
Fowler, C. Hodgson
Fox, —
France, G. H.
Fraser, J. Barlow
Fraser, R. A.
Freeman, William
Freeman, D. J.
Frend, A. B.
Friend, George
Fry, Arthur P.
Fryer, George
Fulford, R. Medley
Fuller, George
Fuller, James F.
Furner, H. G.
Gabriel, Edward
Galbraith, A. C.
Galbraith, A. W.
Gale, Arthur J.
Gamble, S. G.
Gandy, James
Gant, W. J.
Gardner, H. M.
Garry, James
Gatercole, W. H.
George, Ernest
Gething, J. M.
Gibbins, J. G.
Gibson, John
Gibson, John A.
Gibson, A. B. C.
Gill, Wallace
Gingell, W. B.
Glenn, John
Glover, George
Glover, William
Goffe, Edward
Goldsmith, W.
Goodacre, John
Goodacre, R. J.
Goodall, H.
Goodman, T. W.
Goodrich, J. F. D.
Gordon, John
Gordon, Thomas
Gordon, H. T.
Gosling, W. F.
Gotch, J. A.
Gotto, Frederick
Gough, Hugh R.
Gough, W. V.
Gould, W. H.
Gover, A. S.
Gradwell, A. R.
Graham, Alex.
Grant, David
Grant, Patrick
Grant, S. W.
Grant, W. L.
Graves, Walter
Gray, W. G.
Greatorex, R. C.
Greaves, J. E. E.
Green, —
Green, E. F.
Green, F. G.
Green, H. J.
Green, P. P.
Greener, M.
Greenhill, W.
Grellier, W.
Gribble, C. R.
Gribble, H. A.
Grieve, Charles
Griffith, J. P.
Griffiths, R.
Gimblette, H. J.
Groom, R.
Grose, V. J.
Grosvenor, S. B.
Groves, Thomas
Guillaume, G. H.
Guy, A. Lewis
Gwyther, W. W.
Hacking, N. H.
Haines, G. F.
Haines, R. J.
Hall, John
Hall, E. T.
Hall, G. A.
Hall, J. George
Hall, J. Green
Hall, W. J.
Hamblin, A. H.
Hambridge, F. C.
Hamilton, J.
Hamilton-Gordon, G.
Hammack, B. L.
Hammond, F.
Hammond, G.
Hansard, O.
Hansom, E. J.
Hansom, H. J.
Hansom, J. S.
Harding, John
Harding, Michael
Hardy, Richard
Harger, Frank
Harland, A.
Harper, E.
Harris, A.
Harris, J.
Harris, T.
Harris, E. S.
Harrison, S.
Harrison, W.
Hartas, T.
Hartley, H.
Harvey, J.
Hasleden, Thomas
Haslam, G.
Haughton, G.
Hawe, William
Hawtin, W. H.
Hay, William
Hay, James M.
Hay, William H.
Hayes, E. G.
Haynes, W. H.
Hayward, J.
Hayward, P. B.
Hayward, R. W. G.
Heald, Thomas
Heathcote, C. H.
Heaton, Edwin
Heaton, George
Heazell, W. A.
Hebb, John
Heiton, Andrew
Hellyer, T.
Henderson, G.
Henderson, J. Jun.
Henderson, A. R.
Henman, C.
Henman, W.
Henry, David
Heron, James
Hesketh, W.
Hesketh, R. L.
Hetherington, J. C.
Hewitt, Edward
Hewitt, Joseph
Hewett, E. R.
Hey, William
Higgins, James
Hill, Arthur
Hill, Henry
Hill, Samuel
Hind, Thomas
Hindle, W. J.
Hinds, Henry
Hinton, G. H.
Hiscoe, Arthur
Hobden, —
Hobson, Peter
Hodge, J. L.
Hodge, T. H.
Hodges, R. F.
Hodgkinson, E. C. P.
Hodson, George
Hogg, William
Holden, John
Holden, E. E.
Holden, J. P.
Holding, M. H.
Holford, F. H.
Holland, T. J.
Holmes, John
Holmes, J. L.
Honeyman, J.
Hoole, Elijah
Hoole, A. H.
Hooper, Francis
Hooper, T. R.
Hopkins, W. J.
Hopkinson, A.
Hopton, R.
Hornblower, F. W.
Horner, H. P.
Horton, William
Houghton, C. M.
Houle, Josiah
Hoult, F. J.
Howdill T.
Hudson, John
Hudson, E. W.
Hudson, W. M.
Huggins, S.
Hughes, E.
Hughes, Fred. G.
Hughes, W. B.
Hukins, J. C.
Hulbert, M. C.
Hull, William
Hunt, James
Hunt, C. W.
Hunt, F. W.
Hunt, W. H.
Hunter, Percy
Hurley, Jesse
Hurrock, David
Hutchinson, John
Hutchinson, Robt.
Hutchinson, T. J.
Huxley, W. F.
Hyde, F. W.
Hynes, S. F.
I'Anson, Edward
I'Anson, E. B.
Imrie, B. B.
Ingall, George
Isaacs, L. H.
Isitt, Herbert
Jackson, —
Jackson, George
Jackson, Richard
Jackson, William
Jackson, C. J.
Jackson, E. A.
Jackson, F. W.
Jackson, T. G.
James, J. W.
Jenkinson, T. H.
Jennings, J.
Jennings, W. C.
Jerman, J.
Johnson, Joseph
Johnson, William
Johnson, C. W.
Johnson, F. H.
Johnson, R. J.
Johnson, R. W.
Johnston, A.
Johnston, C. S. S.
Jolley, William
Jones, Charles
Jones, David
Jones, Edward
Jones, Humphrey
Jones, Nelson
Jones, A. G.
Jones, C. L.
Jones, E. R.
Jones, G. Fowler
Jones, H. J.
Jones, G. H. Fowler
Joseph, N. S.
Judge, George
Judge, M. H.
Jurd, William
Keirle, Robert
Kelly, W. H.
Kelsey, Walter
Kemp, Fredk. N.
Kempson, F. R.
Kempster, J. F.
Kendall, J.
Kennedy, G. P.
Kennedy, J. D.
Kerr, Robert
Kerridge, James
Kersey, A. H.
Kessen, E. H. T.
Kidner, Wm.
Kinder, Arthur
Kinder, H. A.
King, Charles
King, Zephaniah
King, William R.
King, C. R. B.
King-Church, J. N.
Kinnear, C. T. H.
Kinnear, R. R.
Kirby, E.
Kirk, Charles
Kirk, Herbert
Kirk, A. H.
Kitching, W. H.
Knapp, L. M.
Knight, Fred. G.
Kohler, C. J.
Lacey, Arthur J.
Lacey, J. Turk
Lait, William
Lamb, J. Barr
Lambert, G. F.
Lambert, T. J.
Lamborn, W. H.
Landless, Wm.
Langford, C. F.
Langford, G. E. S.
Langriske, Rd.
Langshaw, G.
Langston, H. H.
Lansdowne, E. A.
Lanyon, John
Lash, John E.
Latham, Albert
Lavender, R. M.
Law, Edmund
Law, J. T.
Lawrence, Ben.
Laws, James T.
Lawton, —
Lawton, James
Leach, C. P.
Lee, Frederick
Lee, Charles W.
Lee, Ernest C.
Lee, John T.
Lee, Philip B.
Lee, Sydney W.
Leeming } Halifax
Leeming }
Lees, Wm. H.
Legg, Henry S.
Leighton, F. B.
Lemon, James
Le Rossignol, F.
Lethbridge, G.
Lett, Arthur
Leuchars, E.
Lewis, J. C.
Lewis, T. Hayter
Linaker, C. E.
Lindsay, J.
Lish, Joseph J.
Little, —
Little, Wm.
Livesey, Wm.
Lockyer, G. E.
Lofthouse, A.
Lofthouse, R.
Löhr, C. H.
Looker, J. W.
Lovejoy, A.
Lownsborough, W.
Lowther, E. J.
Luff, H. G.
Lunn, Wm.
Lynam, C.
Lyon, Walter F.
Macara, Neil
MacFarlane, D.
Mackenzie, J. R.
Mackinnon, A. R.
Mackland, J.
Maclaren, J., }
Maclaren, J., } Dundee
MacLaren, J. M.
Macnamara, J.
Macnaughten, A. W.
Macpherson, A.
Maitland, Andrew
Maitland, A., jun.
Maitland, James
Malcolm, J.
Mansell, T. H.
Markham, S. S.
Marks, E.
Marriner, C.
Marsh, J. C.
Marsh, R. B.
Marsh, T. V.
Marshall, A.
Marsland, E.
Martin, Henry
Martin, E. J.
Martin, G. D.
Martineau, E. M.
Marwick, T. P.
Massa, Thomas
Masters, H. J.
Mather, R. B.
Mathews, J. Douglass
Maude, John
Maxwell, James
May, Harry
May, E. J.
McAlister, Alex.
McCann, J. P.
McCarthy, C. J.
McCurdy, J.
McElwee, Wm.
McFadzen, T. B.
McGovern, J. H.
McLachlan, H.
McLachlan, J.
McLeod, John
McMillan, D.
Meakin, F.
Meakin, W. F.
Meader, F. J.
Medland, W. C.
Meeson, F. R.
Meggett, John
Meldrum, R.
Mercer, John
Mercer, F. T.
Merrin, C. W. P.
Micklam, T.
Micklethwaite, J. T.
Middleton, J.
Middleton, G. A. T.
Millar, —
Millar, R. C.
Millard, W. J. N.
Miller, A. L.
Miller, W. P.
Miller, F. T. W.
Millican, W.
Miles, C. T.
Mills, J. E.
Mills, W. E.
Millwood, A.
Milne, David
Milne, John
Milne, W. O.
Milner, Allen E. J.
Mitchell, Alex. McG.
Molecey, G. T.
Moncrieff, J. C.
Monro, J. M.
Monson, Ed., jun.
Montgomery, J.
Moore, Charles
Moore, J. H.
Moore, Robert
Moore, T., }
Moore, —, } Sunderland
Morham, R.
Morison, J.
Morley, Fredk.
Morris, John
Morris, F. E.
Morris, J. A.
Morris, W. W.
Mortimer, Wm.
Morton, A. C.
Moseley, Andrew
Mossop, John
Mouly, J. H.
Mountford, E. W.
Muirhead, T.
Muller, C. M.
Mullins, A. R.
Mundy, T. E.
Munro, Philip
Munro, William
Murdoch, J., Ayr
Murdock, John
Murgatroyd, J.
Murray, James
Murray, Wm.
Murray, A. E.
Murray, R. C.
Myles, Andrew
Myres, J. J.
Myers, T. H.
Nash, W. Hilton
Neale, James
Nelson, B.
Nevill, Ralph
New, E. V.
New, G. B.
Newell, T.
Newey, C. Isaac
Newman, A. H.
Newman, J. T.
Newton, W. J.
Newton, T. W. F.
Nicholl, S. J.
Nichols, D. C.
Nicholson, R.
Nicholson, T.
Nicholson, T. C.
Niven, William
Noble, Christr.
Norman, A.
North, C. N. McI.
Northcote, A. E.
Norton, John
Noyes, J. G. F.
Nunn, Benj. H.
O'Brien, R. D.
O'Byrne, James
Ogden, Paul
Ogle, R. B. E.
Oliver, Andrew
Orr, R. T.
Osborn, Richard
Osborn, F. B.
O'Sullivan, C. F.
O'Sullivan, J. J.
Oswell, A. E. L.
Ough, H.
Ower, Charles
Ower, Leslie
Page, G. Deas
Page, T. A.
Pain, Wm.
Paine, E. J.
Paley, E. G.
Parken, A. H.
Parker, Stanley
Parkinson, R.
Parkinson, W. H.
Parr, Samuel
Parsons, Henry
Patchett, T. L.
Paterson, —, }
Paterson, R., } Edinburgh
Patrick, G.
Pattinson, J.
Paul, John
Paull, H. J.
Pawley, C. J. C.
Payne, Alexr.
Payne, John
Payne, W. Seth
Peak, Henry
Pearce, Edwin
Pearson, John L.
Pearson, J. M.
Peddie, J. M. D.
Pearson, W. J.
Peirce, Peter
Pemberton, J. H.
Perress, R. B.
Penistone, H.
Penrose, F. C.
Penson, R. K.
Penty, W. G.
Perkin, Henry
Perry, George
Perry, H. R.
Perry, J. Tavenor
Peter, Otho B.
Petit, Henry
Peto, H. A.
Pettigrew, A. C.
Phipps, C. J.
Phipson, R. M.
Pickard, J. H.
Pickering, Richd.
Pickwell, R.
Picton, W. H.
Pilkington, A. J.
Pink, C. R.
Pinn, Charles
Pinney, J. G.
Plumbe, R.
Plummer, A. B.
Pocock, W. W.
Poley, E. W.
Pollard, Tom
Pollard, Wm.
Pontern, A. C.
Ponting, C. E.
Poole, G. T.
Pope, Alexander
Pope, Reginald
Popplewell, F.
Porter, Thomas
Potts, Jos., jun.
Powell, Evan
Powell, Lewis
Power, Ed.
Pownall, John
Pownall, F. H.
Pratt, F. J.
Pratt, H. W.
Pratt, W. D.
Preedy, Fredk.
Prescott, James
Preston, R. B.
Price, John
Prichard, John
Prothero, H. A.
Protheroe, F.
Pryce, T. E.
Pugin, P. P.
Purdie, A. E.
Purdue, W. A.
Quilter, J. S.
Ragg, Wm. F.
Raikes, Robt.
Railton, Wm.
Randall, J. L.
Randell, J. A.
Ranger, Wm.
Ravenscroft, Wm.
Rawlings, Wm.
Rawlins, H. A.
Reay, Thomas
Redfern, F.
Redmayne, G. T.
Reed, Matthew
Reed, Fred H.
Reeve, J. Arthur
Reeves, C. Wm.
Reid, T. F. R.
Reilly, M. S.
Rhodes, F. W.
Rich, F. W.
Richards, T. R.
Richardson, Wm.
Richardson, T. H.
Rickwood, Wm.
Riddett, L. C.
Ridge, Robert
Ridge, Lacy W.
Ridgway, E. R.
Riley, Wm. Edw.
Rimmer, James
Ritchie, James
Roberts, Thomas
Roberts, F. Hay
Roberts, James M.
Roberts, O. M.
Robertson, D'ndee
Robertson, David
Robertson, J. Murray
Robertson, W. W.
Robins, E. C.
Robinson, James
Robinson, M.
Robinson, Walter
Robinson, J. L.
Robinson, W. W.
Robson, E. R.
Roche, K. D.
Roe, R. M.
Rogers, J. M.
Rollinson, S.
Rollinson, C. W.
Rooke, A. B.
Ross, Alexr.
Ross, Henry
Ross, James
Ross, Malcolm
Roumieu, R. St. A.
Rowe, Wm.
Rowe, R. R.
Rowland, J.
Royle, Wm. A.
Russell, R. F.
Sadler, G. W.
St. Aubyn, F. W.
St. Aubyn, J. P.
Salmon, James
Salmon, W. F.
Salomons, Ed.
Samson, C. H.
Sangster, Richard
Satchell, G. F.
Saunders, G.
Saunders, T. R.
Sawday, A. E.
Sawyer, R.
Sayer, C. E.
Scarnell, G.
Scargill, Wm.
Schofield, A.
Scholefield, C.
Scott, G. G.
Scott, J. Oldrid
Scott, T. T.
Scott, W. G.
Scruton, Victor
Scrymgour, W. A.
Seanor, M.
Searle, S. E.
Sears, J. E.
Sear, W. L.
Sedding, J. D.
Seely, Wm.
Senior, Wm.
Seth-Smith, W. H.
Seward, J. A.
Seymour, J. S.
Shackleton, W.
Sharp, J. P.
Shaw, Henry
Sheffield, H. N.
Shepard, H. D.
Shepherd, J.
Sheppard, T. G. P. W.
Sheriff-Clunes, A.
Shilcock, J.

Shoppee, C. J.
Showell, John
Shrewsbury, E. J.
Silley, Abm.
Sim, John
Sim, J. Fraser
Simpson, F.
Simpson James
Simpson, Jonathan
Simpson, J. W.
Simpson, A. W. R.
Sinclair, R. C.
Skelton, T. A.
Skirving, Alex.
Slater, John
Small, J. W.
Smirke, Sydney
Smith, Arthur
Smith, A., Smith, S., Hastings
Smith, Charles
Smith, H.
Smith, A. G.
Smith, A. W.
Smith, C. S.
Smith, E. B.
Smith, E. J.
Smith, F. S.
Smith, J. F.
Smith, J. O.
Smith, J. H.
Smith, J. J.
Smith, J. M.
Smith, Jos. E.
Smith, S. E.
Smith, T. Roger
Smith, T. T.
Smith, W. B.
Smyth, R. O. B.
Snell, H. J.
Snell, H. Saxon
Solomon, Lewis
Soppitt, James
Southron, T.
Spaull, W. H.
Spiers, R. P.
Spiers, W. L.
Spratt, E. F. A.
Spurrell, H.
Stafford, W. H.
Stalker, John
Stannus, H.
Stapley, H.
Stapley, S.
Starr, E.
Statham, H. H.
Steane, Isaac
Stedman, C. M.
Stenning, A. R.
Stent, F. W.
Stevens, J.
Stevens, W. H.
Stevenson, A.
Stevenson, J.
Stevenson, S. R.
Stewart, J. B.
Stimson, E. C.
Stirling, Wm.
Stocks, Ben.
Stockwell, A.
Stokes, Leonard
Stokes, Walter
Stone, Coutts
Stone, Thomas
Stone, Herbert
Stone, William
Stone, J. H.
Stone, Percy G.
Stopher, Thomas
Stout, J. E.
Stratton, Wm. T.
Street, A. E.
Street, T. J.
Street, W. C.
Strong, If.
Stuart, John
Sugden, H. T.
Sumners, H.
Swettenham W. N.
Symes, S.
Syme, W. H.
Tabberer, B.
Tallis, E. F.
Tanner, Henry
Tanner, A. W.
Tarring, F. W.
Tarver, E. J.
Tate, A. Lacy
Taylor, Charles
Taylor, Edward
Taylor, Richard
Taylor, A. J.
Taylor, J. M.
Teale, Frank
Teasel, J. E.
Teulon, W. M.
Thicke, F. E.
Thomas, John
Thomas, Josiah
Thomas, T. E.
Thomas, J. A.
Thomason, Y.
Thompson, —
Thompson, Wm.
Thompson, A. E.
Thompson, T. B.
Thompson, T. W. A.
Thoms, G. E.
Thomson, A.
Thomson, D.
Thomson, F. D.
Thomson, J. J.
Thomson, J. M.
Thomson, R. M.
Thorne, A.
Thornhill, E.
Thorp, George
Thorp, John
Tijou, H. E.
Tillett, James
Todd, Wm.
Tolley, James
Tomalin, H. F.
Tomes, C. W.
Tomkins, S. E.
Tomlinson, W. B.
Toner, John
Toppitt, Wm. Thos.
Townsend, H. M.
Traylen, J. C.
Treasure, H. H.
Trepess, F. P.
Troughton, T. B.
Tudor, E. C. B.
Tully, T. C.
Tuke, W. C.
Turner, Edwin
Turner, T.
Turner, H. G.
Turner, J. G.
Tuxford-Hallatt, G. W.
Tweedale, J.
Tyerman, J. B.
Underhill, C. F.
Unsworth, W. F.
Usher, John
Utley, Samuel
Vacher, Sydney
Vacherot, Alex.
Veal, J. Read
Vevers, Richard
Vernon, Arthur
Verrall, A. J.
Vialls, G.
Vining, E.
Voisey, V. W.
Voisey, C. F. A.
Waddingham, T.
Wade, F. B.
Wadling, H. J.
Wadmore, J. F.
Wagstaffe, T. R.
Wainwright, T. T.
Waite, Richard
Wakeford, H.
Walker, D.
Walker R (Kendal)
Walker, R., Cork
Walker, E. R.
Walker, J. C.
Walker, J. R.
Walker, T. H. W.
Waller, F. S.
Wallis, W. E.
Walters, A.
Walton-Wilson, J. W.
Ward, W. H. M.
Wardle-Bulcock, J.
Ware, C. E.
Waring, T. A.
Warner, A. E.
Waterhouse, A.
Watson, Fothergill
Watson, Wm. J.
Watson, T. H.
Watson, T. L.
Watt, Robert
Waymouth, G.
Weaver, H.
Webb, Aston
Webb, Edward
Webb, Walter
Webb, George W.
Weeks, C. F.
Weller, John
Wellsted, W. H.
West, John
Wheeler, Robert
Wheelhouse, G.
Whellock, R. P.
Whichcord, J.
Whiddington, W.
Whitaker, John
Whitelaw, J.
White, Henry
White, William
White, E. E.
White, Wm. H.
Whitfield, R. O.
Whitney, T.
Whyte, E. T.
Wight, J. R.
Wilcock, Wm.
Wilde, G. A.
Wilde, S. J.
Wilds, Wm.
Wilds, W. H.
Wilkinson, R. S.
Williams, Wm.
Willins, E. P.
Willis, T. W.
Wills, A. H.
Wills, John
Willson, T. J.
Wilson, Joseph
Wilson, J. B.
Wilson, T. H.
Wilson, W. G.
Wiltshire, C. H.
Wimperis, J. T.
Wing, Vincent
Wise, Charles
Witherington, W. S.
Withers, R. J.
Wonnacott, T.
Wood, Bristol
Wood, Ambrose
Wood, Edgar
Wood, J. H.
Woodhouse, J. H.
Woodman, J.
Woodrow, E. A. E.
Woodward, Wm.
Woodward, J. A. J.
Worthington, T.
Worthington, T. P.
Worley, C. H.
Wright, Thomas
Wright, J. S.
Wyatt, Matt.
Wyborn, S. M.
Wykes, William
Wyllie, D. V.
Wylson, O. C.
Young, Arthur
Young, Henry
Young, John
Young, John, Perth
Young, Sidney

Mr. Ewan Christian (President of the Royal Institute of British Architects) and other architects have not signed the agreement, on the grounds that they do not now compete, but at the same time heartily support the objects of those who have signed the agreement.

Where no *initials* appear after the name, the *signee* is one of a *firm* of architects.

Railway Progress in Australia.—From the Statistical Register of New South Wales we learn that the railways in that Colony have almost quadrupled their mileage since 1873, and that the working expenses have risen from 50·8 to 55·1 per cent.; still the net profit resulting from these public works amounted to 764,228*l.*, which on the 15,338,493*l.*, the total cost incurred in respect of them, gives a dividend within a fraction of 5 per cent. The total earnings of the railways of the Colony for the year 1882 amounted to 1,698,863*l.* Of this sum 582,424*l.* was received under the heading of "coaching," and 1,106,770*l.* for carriage of goods, miscellaneous receipts being 9,669*l.* The expenditure for working expenses amounted to 934,635, which leaves 764,228*l.* as the net earnings over working expenses. The total number of passengers carried during the year was 8,984,313, and the number of tons of goods was 2,557,260.

THE MYSTERIES OF COLOUR.

SOCIETY FOR THE ENCOURAGEMENT OF THE FINE ARTS.

On Thursday evening, the 15th inst., a very able lecture on "The Mysteries of Colour" was delivered by Mr. G. A. Storey, A.R.A., before the members of the Society for the Encouragement of the Fine Arts. Mr. W. Cave Thomas (in the absence of Mr. James Edmeston) presided.

Mr. Storey, in the course of some introductory remarks, said that some men were born colourists, as others were born musicians, whilst others were incapable of producing colour. Thus it was supposed by some that good colouring was a gift of nature, and, therefore, they did not see the advantage of discussing the subject. But, though a fine colourist was somewhat rare, the desire for colour was universal. There were thousands who, in the matter of dress, would be glad to know what colours harmonised best with each other, and, if no one could be taught to be a fine colourist, many might learn sufficient of the art to prevent their doing bad things if they did not do very good ones. An eye for colour might be supposed to be a rare thing; he did not think it was, though training would always improve it. A good voice might be wasted for want of cultivation; so, he thought, might an eye for colour. He must not be supposed to set aside in any degree the higher qualities of art because he laid so much stress upon colour, for the thoughtful, the poetical, the imaginative, all that was beautiful in art, could and should be enhanced by greater perfection in colouring. Let them consider colour in the same light that they considered language, namely that it had an alphabet, a dictionary, and a grammar; it had its letters, its words, its sentences, and its song, its harmonies, its symphonies, and its full chorus. The letters consisted of those primary and pure tints,—the red, blue, and yellow,—which could not be composed. They were the simple elements which composed all the other colours, and which were their A, B, C, and all their short alphabet. But although they had only three letters in their alphabet, they made them do different service by multiplying or dividing them, and thus changing their proportions to each other; and by this means they were enabled to produce an infinity of distinct and different tints. By combining two of the primary tints they produced a secondary tint, and so by combining two of the secondaries they produced a tertiary. Next with regard to words. Any beautiful tint they might see that was odd or different from the primary colours was a word in the language of colour, and they must try to spell it out, and then put it down in their dictionary. The more words they noted down the richer would be their language of colour, and the greater the variety that they could introduce into their work. Some painters got into the habit of using a few pet tints and a few pet arrangements which came easy, and the consequence was that when they saw a number of their pictures together they were likely to get wearied by their monotony. This was a sure sign of mediocrity, whereas the great artist was for ever seeking something new, for ever going onwards. Progress was his only true delight, invention seemed necessary to his existence, and thus the characteristic of true talent was shown not only in the quantity of his works but also in their variety. The sentence was the first step in combining tints in such a manner as to produce harmony,—they must be so combined as to set each other off to the best advantage. They might form for themselves a phrase-book in their minds by remembering certain effects in nature. There were no combinations in colour, however artful, that were not to be found there, so that by simply reflecting upon her work they might conjure up combinations of colour much more beautiful than any diagram. Suppose colours to be lighted by two lights, the warm glow of sunshine and the cold or bluish light that comes from the sky. The effect of this warm light is to make white warm and, apparently, of a yellow colour; to make scarlet of an orange tint, and green almost yellow. The cold light, on the contrary, makes white a cold grey, red to approach purple, and green to become almost blue. The cool colours in this scheme were the shadow colours, and the warm ones the colours of the light, and as the shadow set off light, so did the cool colours set off the warm ones. But if their colours were either all hot or all cold, the effect was not only disagreeable, but it was unnatural. Let them remember that the first rule they should lay down in all colouring was that each tint and tone that they employed must be beautiful in itself, quite independently of the extra beauty that might be imparted to it by contrast with other colours, so that in a beautifully-coloured work there should not be one small portion of it that was not a beautiful colour in itself. The song of colour was a complete composition, from which nothing could be taken away, and to which nothing could be added, without destroying its unity and harmony. It might be a simple air like a portrait of Velasquez, the notes all undertones; it might be a pleasing melody and a simple poem like the "Prodigal Son," by Teniers, in the Louvre; or it might be a gorgeous overture like the "Marriage at Cana," by Paul Veronese, or any of those wonderful compositions of Rubens; or it might be a mere symphony,* like those quiet evening pictures by Cousins and Girtin, or a rich melody and a fine elegy like Turner's picture of "The Old *Téméraire* towed to her last Moorings"; but whatever it was, it was complete, and contained within itself every element to give it strength and life and beauty. It was not every song that was sung on canvas that had all these qualities, for they required the greatest skill, the greatest knowledge, and the greatest love to sing them. Such works could not be produced by merely taking a canvas out of doors and sitting down and copying a little bit of nature, or even a big bit of nature. Such works were not the haphazard freaks of doubtful genius, nor the ill-arranged and ill-assorted studies by a tyro who did not believe in composition, but they were the greatest efforts of the greatest men, painted in the full enjoyment of their own powers, and for the delight of all those who loved the beautiful. They might study them carefully, and try to find out as much as they could about them, but really the best thing to do was simply to contemplate them and enjoy them. He would recommend students to paint with love, to copy all that they saw in nature as if they loved it; that was, tenderly and carefully, for they should remember that if there was no love in their work it was dead work. It seemed to him that it was this very love in art which was its breath of life, it was this very element, and this only, which made it immortal, and it was as much a living power in architecture, sculpture, music, and poetry, as it was in painting, so that when they looked at any work of art, let them keep saying to themselves, "Is there any love in it?" and if there was not, then it belonged to that very great crowd of works that grew so luxuriously around them, which was seen once and then disappeared for ever. Before concluding he would propose that they should have a school for colour, and where could he better make such a proposition than in a Society for the Encouragement of the Fine Arts? In the few things that he had been enabled to say about colour he had but touched on the very borders of a wide subject that applied to everything around them that was important to manufactures as it was to art, and it could not be thoroughly and effectually gone into except in a school devoted to that purpose. Mr. Storey then drew an imaginary picture of a school for colour, expressing the hope that if any great benefit were to be derived from it, his castle in the air would eventually become a reality. The building should be in form a simple quadrangle, with pretty gardens, fountains and trees in the centre, a fine meadow or two connected with it, surrounded by a pretty country. In this school all methods of colouring should be taught, in oil, water-colours, fresco, and various kinds of decoration, certainly not omitting the decoration of houses, because some of the tints used in these decorations were of a most lugubrious character. They looked as if they had been painted in fearful red and had gone black in despair. Then he would not keep the students at home, but send them out every where, so that they might bring in gems of colour. The students should not work alone, but a number of them together, as they would probably derive great benefit from working in unison. If his idea of a school for colour were but a dream, there was no reason why they should not make colour their study, for the poorest artist who produced colour produced something precious.

* A "symphony" is a larger and more important form of composition than an "overture." But the whole phraseology of this sentence shows a want of knowledge of the real meaning of the musical terms employed.—Ed.

A long discussion ensued, in which Mr. Lennox Browne, Mr. Orrock, Mr. Haité, Mr. Cope, and Mr. Forbes Robertson took part. The lecture was spoken of in the highest terms. The lecturer's proposal for a school for colour, however, evoked considerable difference of opinion. A cordial vote of thanks was accorded to Mr. Storey for his lecture, in which the last-named speaker said the elements of beauty, humour, and order were to be found, combined with an admirably distinct delivery.

JOHN THORPE AND THE ENGLISH RENAISSANCE.

ARCHITECTURAL ASSOCIATION.

THE twelfth ordinary meeting for the present session of this Association was held on Friday, the 17th inst., Mr. Cole A. Adams (the president) in the chair.

The following new members were elected, viz., Messrs. E. W. Lewcock, W. Stirling, W. Alford, P. A. C. Wilkinson, E. J. Cooper, C. J. H. Cooper, C. Earp, and A. B. Walters.

The announcement that the President had been elected a member of the Council of the Institute was received with acclamation.

With regard to the Association Studentship, the following award was read:—

"We have the pleasure to inform you that we have awarded the Travelling Studentship to Mr. S. J. Oakshott, and the prize of five pounds to Mr. G. G. Woodward. We specially commend the drawings submitted by Messrs. W. H. Bidlake, G. G. Wallace, and E. H. Selby. There were nine competitors.—We are, &c. (signed), Thos. E. Collcutt, Charles Henman, jun., Thomas Batterbury."

The following nominations of officers for the next session were announced:—For president, Mr. Cole A. Adams; and for vice-presidents, Messrs. C. R. Pink and H. W. Pratt.

Mr. J. A. Gotch then read a paper entitled "John Thorpe and the English Renaissance."

The beginning of the sixteenth century witnessed a series of important events, which, though occurring in widely different spheres of action, may all be traced to one cause,—a re-awakening of mankind from the intellectual torpor in which it had been cast by the religious system of the Church of Rome. The backbone of that system was authority. To the officers of that church were confided the only keys that unlocked the mysteries of the universe; they alone were competent to explain the secrets of nature; they alone were able to introduce sinful man into the august presence of the supernatural powers. In their cloisters were immured the only students. Almost all knowledge, almost all chances of obtaining knowledge, lay with them. Outside their walls was an intellectual desert. Laymen were content with struggling for existence, either as potentates bent on buffeting each other, or as knightly followers of such potentates, with whom they were content to stand or fall; or else as serfs, with whom the struggle for life lost much of its charm. Laymen had neither time nor inclination to exercise their intellects; with them brute force was not only their umpire in all disputes, but actually their boon companion.

Perhaps the most notable exception to this state of things was to be found in Italy, at the very doors of the Pope's own citadel. Italy was not so given over to strife as the rest of Europe seems to have been. Here men still retained some love of culture, and were content to match their wits against other men's swords. When, therefore, from innumerable causes, all working in the same direction, men began to awake from the lethargy of the Dark Ages. Italy was a fruitful soil, in which the new seed rapidly brought forth an abundant harvest.

This re-awakening of mankind, this new birth, has very happily been termed the Renaissance; but it would be a mistake to suppose that the term is applicable only to architecture, or even the arts. The Renaissance in art is only one phase of the great upheaval which affected the whole world, religious, literary, artistic, and political. In religion we call the same movement the Reformation. In English politics it found expression after a time in the great Rebellion. In literature, one result was Rabelais with his brutal scorn of bigotry and priestly pretensions; another was our own Shakspeare, the very embodiment of all that is purely and delightfully human.

England's part in this movement was directed to rendering assistance rather than taking the initiative. Both our Reformation and our Renaissance were imported, as printing was. With the Reformation, however, we need not trouble ourselves further. The Renaissance is more than enough to occupy our attention.

It has been observed how excellent a soil Italy offered for the fructification of the new seed. The harvest that ensued can only be fully appreciated by those who have visited the country. Out of her fulness she could well spare something to her neighbours, and we are not surprised to find Italian artists visiting and permanently residing in foreign lands. France, being nearer the source, was influenced first. England, however, was not long in catching the Italian fever. It affected everything,—modes of thought, modes of speech, writing, eating, dress, manners, building, gardening. Italy was the bourne whither all young men went on their travels, and they returned saturated with Italian ideas, which, when they came to express them in an English atmosphere, underwent a curious change. Roger Ascham, in his "Scholemaster," first published in 1570, laments this "Italianating" of English youth:—

"If Scylla drown him not" [he says of the young man who has gone to Italy] "Carybdis may fortune swallow him. Some Circes shall make him, of a plain English man, a right Italian. And at length to hell, or to some hellish place, is he likelie to go; from whence is hard returning, although one Ulysses, and that by Pallas aid, and good council of Tiresias once escaped that horrible den of deadly darkness."

And further on he says:—

"If some yet do not well understand what is an Englishman Italianated, I will plainly tell him. He, that by living and travelling in Italy bringeth home into England out of Italy, the Religion, the learning, the policy, the experience, the manners of Italy."

And yet, in spite of Ascham's denunciations, he, in common with all of his age, was deeply infected with a spirit which, if not Italian, came to us primarily from Italy,—I mean the classical spirit which pervades the whole literature of that time. In another book of his, "Toxophilus," he says plainly that it would have been easier for him to have written it in Latin or Greek, and takes some credit to himself for having written, as he says, "this English matter in the English tongue, for English people." His great desire, moreever, was to see English poetry written in hexameters instead of in rhymed lines. This experiment has been tried more than once, but success is impossible. The hexameter is not suited to the English tongue, and the fact of Ascham advocating it so strongly shows how thoroughly he was carried away by the tide of classical learning which overflowed all Europe.

I dwell at some length on the literature of that time because it seems to me to be very comparable to the contemporay architecture. There is, however, this great difference; that although both of them abounded with classic forms, literature gradually freed itself from them, and became purely English, while architecture succumbed, and became less and less English with every succeeding decade.

Perhaps the most characteristic book of that time is the "Euphnes" of Lyly, and a very dull book it seems to be. However, it abounds with classieal allusions. Everything is measured with a classical rule. You are pelted with the ancients, their customs, their superstitions, their excellences from one end of the book to the other. You cannot read a page without coming across them, their gods, their philosophers, or their poets. And the same sort of thing is found in the architecture of the time; Latin inscriptions, Latin epitaphs, statues of the twelve worthies, busts of Roman poets, Greek philosophers, heathen gods, nymphs, and satyrs. And yet, with all this, the books are English; and so are the buildings. Wollaton Hall is no more like the Château de Chambord, than Shakspeare's *Falstaff* is like Rabelais' *Panurge*.

It took about two generations to infect English architecture thoroughly with the Classic spirit. But by the time that wealthy Englishmen had made up their minds that they liked the Italian details, John Thorpe appeared upon the scene. He came at a very fortunate juncture for an architect. The times were settled. The old disputes which had convulsed England from the Tweed to the Exe were disposed of. The country gentlemen, whose houses had been their castles, found the old fortress arrangements ill-suited to the growing elegance and luxury of the age. They wanted new houses. The revenues of the dissolved monasteries furnished them with ample means. House-building became the rage. The fever seized on the whole nation, from the Lord Treasurer to "Mr. Johnson ye druggist," both of whom were clients of John Thorpe.

Some people are inclined to doubt whether Thorpe really was an architect, and to hold that he was merely an amateur who made sketches of existing work or of the large houses that were then being built; and it is not easy from his book alone to prove that they are wrong, for among the drawings is a plan of Henry VII.'s Chapel at Westminster, which, from anything it says, and did we not know otherwise, we might almost conclude to be as much his design as the others. However, I hope to satisfy you from more than one source that Thorpe was actually an architect.

Before proceeding to argue about the book, however, it may be as well to describe it.

It is a volume of folio size, some 17 in. by 12 in., consisting of sheets of thickish rough drawing paper, with a particular water-mark. The pages are used both back and front as though it had been bound before being used; but yet this clearly cannot have been the case, since some of the drawings go right down into the fold of the book, and have evidently been bound up after completion. In one case, however, a plan which covers two pages is stopped short of the crease or fold by a straight line, and continued on the opposite page from a similar line, thus avoiding the burying of any part in the fold. The drawings, generally speaking, are in ink over pencil lines, and in many cases the pencil lines have not been rubbed out. Some few are in pencil only, but these generally are slight and rough. There are many more plans than elevations, and there is only one section. There are a few pages of full-size mouldings, one of the Five Orders, carefully drawn with proportional lines, one or two of sketches for ornament, and one with elaborate instructions how to put a building into perspective,—instructions which seem generally to have been neglected by Thorpe, for his perspectives are far from correct. The drawings seem to have been ruled in with a common pen, and probably with a rolling ruler. Some of the plans are very neatly done, most of them are tolerable, some are bad. The elevations, or "Uprights" as he calls them, are generally indifferent; they combine the geometrical and the perspective treatment, not altogether with success. If these are the best drawings turned out from the leading office of the time, we may congratulate ourselves upon the advance made in architectural draughtsmanship since the Renaissance.

There are 282 pages in the book, some score of which, perhaps, are blank. More often than not there is one drawing to a page; perhaps the ground-plan on one page, and the upper plan on its opposite. But many of the designs have nothing but a ground-plan; so, whatever the book is, whether a note-book or a collection of original designs, it is not a complete account of the buildings shown. There are about 140 different buildings illustrated, of which some fifty occupy two or more pages. Only fifty-five of the 140 are either identified or have a title put on them by Thorpe. There remain, therefore some eighty-five, of which we know absolutely nothing, except that they appear in this book. If we could identify these eighty-five we might perhaps get to know something more about the architect himself. Of this large number a few are clearly only freaks of design, and were never intended to be executed. The bulk, however, appear to be *bonâ fide* designs, intended to be carried out. I have roughly classified them thus:—

Fifteen are sketches not likely to throw any light on the subject.

Twenty are unfinished drawings, and may either be designs begun but abandoned or designs in the midst of being worked out. Some may be identifiable, perhaps, but many of them are hopeless.

There remain forty-seven, of which nine are of half-timber; all the rest, except three, are finished designs of large houses, some of them of very great extent; and I have no doubt that, did we possess plans of the principal Elizabethan houses still existing we could track many of them home to John Thorpe's book. Doubtless not a few of the houses there shown have been destroyed, but some of them certainly ought to be identified; and, if any one possessed any plans likely to be of use, I should be very glad if they would allow me to compare them with Thorpe's, or else do so themselves and acquaint me with the result.

Having learned something of the book the question arises,—What do we know about the man? and the answer is,—almost nothing.

Who was John Thorpe? where was he born? where did he die? how long did he live? To these questions we can give no answer.

From three sources only do we know anything about him; from his book, from a plan made by him and preserved in the Record Office among the State papers; and from a payment to him recorded in the "Issues of the Exchequer."

The plan is labelled "Eltham, 1590," and is a ground-plan of the royal palace there. It has no special title on it to indicate for what purpose it was made, but, judging from its being among the State records, and from the description of some of the rooms,—"decayed lodgings," and "the store-house for the works,"—it seems to be a plan of the premises made for the purpose of enlarging or repairing them. In the middle of the plan is written, in the handwriting rendered familiar by frequent examinations of his book—"exc. p. Jo. Thorpe,"—which fixes its author beyond a doubt.

The other reference to Thorpe occurs, as stated above, in the "Issues of the Exchequer" in the reign of James I., and it is as follows:—

> John Thorpe } 4th of June, 1606. More to him for his } charges in taking the survey of the house and lands by plots at Holdenby with the several rates and values of both particularly, with his own pains, and three others a long time employed in drawing down and writing fair the plots of that and of Ampthill howse, and the Earl of Salisbury's, by commandment of the Lord Treasurer of England, dated the last day of May 1606 ... 70*l.* 8s. 8d.

A plan of Ampthill occurs in Thorpe's book, but none of Holdenby or the Earl of Salisbury's, so far as the plans are identified. We may, however, safely conclude that the above payment was made to the John Thorpe whom we already know, and that he was, in the words of Robert Smythson's epitaph, "Architector and Survayor."

Examining the various plans in the book by the light thus obtained, it is not difficult to believe that the bulk of them are designs in course of being worked out. Some of them are still half in pencil; not unfrequently the upper plan does not correspond exactly with the ground-plan, but includes fresh features, often adopted in the actual building, as at Kirby. There certainly are often puzzling notes, as for instance, "Kytchen, cellar under," or "Hall, great chamber over," or "Gallery above, all this length," as though referring to something actually built. But in one case such a taste (referring to the floor over) is on the ground plan, when the upper plan is by its side, and these notes are just as likely to be memoranda made in designing, as they are to be items of information about completed work.

Some of the plans actually state that Thorpe was engaged upon the buildings. For instance, "Sir Walter Coap at Kensington, pfected p. me J.T." "Queene Mother's howse, falor S^{ct}. Jarmin alla Paree, altred p. Jo. Thorpe" or "Ampthill enlarged p. Jo. Thorpe." Again, on one elevation beneath three types of windows is written "which of these three is best." All of which tends to show that Thorpe was actually a practicing architect, and that here we have his work in the process of design.

Take Wollaton, again. Thorpe gives a plan and half a perspective or elevation, and neither of these agrees with the building as executed, nor could the discrepancies either have arisen since through alterations, or be the result of careless measuring and drawing, for there is a basement in execution which Thorpe does not show, and the ornamental features are not carried out quite as he has drawn them. Among other things the pedestals of the pilasters have each of them a gondola or mooring ring worked in stone, a useless feature, imported bodily and barefaced from Italy. Curiously enough, on his drawing Thorpe has two treatments of these pedestals, as though for choice,—one is a raised panel, the other a gondola ring. Only on one supposition can these things be satisfactorily accounted for, and that is that in this book we have his preliminary sketch.

Some of the notes on the drawings are rather curious, and would lead to sad confusion in the present day if put on a working drawing and sent to the builder; for instance,—"Hall too long by 5 fo." "This front is drawn 10 fo. to narrow, not long ynough." "This cort should be 88 fo. square" (when it scales 70 ft.); or, finally, "This parlor sould have been wyder if the paper had suffered it." So that the only solution that really meets the case is the one just mentioned, that in this book we see Thorpe's brain at work.

That these are the working-drawings from which the houses were actually built I do not believe. Several of the plans I have compared with the actual buildings; in all cases there are discrepancies more or less considerable between them. The main idea in each case has been carried out; even the main walls are built as drawn, but the internal arrangements frequently differ very much, and in essential features; that is to say, the differences cannot have arisen entirely from subsequent alterations. In proof of this I would cite Burleigh House (fol. 57, 58), Kirby Hall (fol. 137, 138, 139, 140)), Slaugham Place (fol. 239, 240), and Lyveden New Building (fol. 215, 216). Then, as already observed, there are many more ground-plans than upper plans; there are only some thirty elevations out of about two hundred drawings, and only one section in the whole book.

Another very important feature is this,—that some of the drawings are copied from a French book on architecture by Jacques Androult du Cerceau, published in 1576. The two books (Androult's and Thorpe's) being in different museums, it is impossible to collate them; but, speaking from memory fresh from the subject, three of Androuet du Cerceau's drawings will be found copied in Thorpe's book, viz., the theatre at St. Germains, plan and elevation; the plan of the Château de Madrid, Paris; and the plan of the Château Anssi le Franc. They have quite a distinct appearance, and differ fromthe bulk of Thorpe's drawings, but a close examination of the two books will go far to show that the Englishman was largely infected with the Frenchman's love of quaint planning. In fact, the quaintest of Thorpe's plans have a French origin.

Having thus come to a conclusion respecting the character of the book itself, let us look a little further at its author, and then at the general character of his work.

In the first place, then, his book covers a large number of years. The earliest date written in it is 1570, in a note on the ground-plan of Kirby, "Whereof I layd ye first stone A° 1570." This agrees with the date of 1572 actually on the parapet. The latest date is 1621, on the plan of the Queen-Mother's howse, "altred p. me, Jo. Thorpe." The period thus covered is fifty-one years, and is practically coincident with the beginning and end of what we call the Elizabethan and Jacobean styles. There are a few intermediate dates as 1596, 1600, in which year he was in Paris, as he has plans of "Mounseer Jammet his howse in Paris," and of "St. Jermin's House, V leagues from Paris." The only other date is 1606, on a house for Sir Wm. Haseridge. But apart from these dates which are actually written with his own hand, we can date many of his buildings from other sources, and thereby obtain a tolerably close sequence, commencing with 1560 and ending in 1621.

Several of the drawings, however, especially the earlier ones, are evidently taken from buildings already erected, and the first identified house which we can suppose to have been designed by him seems to be Copt Hall, in Essex, the date of which is given as 1564 to 1567.

The whole book is devoted to houses. The only exception is Henry VII.'s Chapel, and the commencement of what looks like thee ast end of a church or cathedral. Among the designs are included many of the very largest and stateliest structures of that age, as the following list will show:—

Theobalds, for Lord Burleigh.

Buckhurst House, Sussex, for the Earl of Dorset.

Loseley, near Guildford, Sir George More's.

Knowle, near Sevenoaks, for Lord Buckhurst.

Kirby Hall, Northamptonshire, for Sir Humfrey Stafford.

Burleigh, juxta Stamford, for Lord Burleigh.

Wollaton, near Nottingham, for Sir Francis Willoughby.

Longford Castle, Wiltshire, for Sir Thomas Gorges.

Lyveden New Building, for Sir Thomas Tresham.

Audley End, Essex, for the Earl of Suffolk.

Holland House (enlargement), for Sir Walter Coap.

Aston Hall, Birmingham, for Sir Thomas Holt.

Somer Hill, near Tunbridge Wells, for Lord Clanrickard.

Slaugham Place, Sussex, for Sir Walter Covert.

Danvers House, Chelsea, for Sir John Danvers.

If we could identify others by the plans, we should be able to extend this list.*

THE GERMAN SYSTEM OF ARCHITECTURAL EDUCATION.

SIR,—I beg you to allow me space in your valuable journal to make a few remarks on a subject of much importance and in the interest of those who wish as correct information as possible.

Mr. Spiers says, in his paper read at the recent Conference of Architects [see *Builder*, p. 271, *ante*], "The German academies fail in art because they are linked with engineering instead of with painting and sculpture."

I have studied at the Royal Academy of Architecture at Dresden, under the late Professor Semper. There was no engineering taught, nor did any engineer study there; but the Academy of Architecture was with the Academy of Painting and Sculpture, under the same roof, at the Brühlsche Terasse, surrounded by the *ateliers* of the eminent painters and sculptors, Professors Hübner, Rietschel, Rauch, and others, the students of the three sister arts studying and living in daily intercourse together from the beginning to the end of their career. There was no cramming by the copying of Schinkel's eternal design for ceilings, &c. Neither Professor Semper nor any one of his colleagues would have approved of that, although his works were in high estimation and of great value to the student as well as a guide to his travels.

Mr. Spiers says further on:—"Two other educational sources must here be noted,—1st, the meetings and classes of the Architectural Association, a society unique in its character, existing in no other country and in no other profession." During my stay in Germany, (1872–3) I attended many meetings of the Architectural Vereine at Berlin and Vienna, where the most eminent architects of the day regularly met with all the other members of the profession, as well as their assistants and the students, after they had passed a certain standard, where papers were read, designs exhibited, &c. Anything like it of equal advantage I know not of in England.

But there is one most important difference in the English and German systems which Mr. Spiers most unfortunately did not bring into consideration. In England the architect entrusts the execution of his works to a clerk of works, who, in most cases, is either a bricklayer, a mason, a carpenter, a surveyor's clerk, or a builder formerly in business; in Germany it is a bauführer, a man of considerable education, on the same road which the architect, his employer, has passed before him.

I fear I have been trespassing already on your valuable space, although there may a great deal more be said on so important a subject. I shall, however, be very glad to give any further information which may be required on the subject. WM. CONRADI.

Brussels, May 19th, 1884.

P.S.—I know nothing of the Academy at Zürich, but it is no German academy; and if Mr. Harvey stigmatises it as a schoolboy system, it can have no resemblance to the German academies at Berlin, Dresden, Münich, Vienna, and others.

SEWER CONNEXIONS.

SIR,—Seeing a paragraph in connexion with the Health Exhibition in last week's *Builder* (p. 733), in which Mr. Cockrill, the borough surveyor of Great Yarmouth, takes credit for having invented a pipe-sewer junction-block, I should like to be allowed to say that this contrivance can hardly be said to be the work of his mind, seeing that I brought out what I take to be, from the description, the selfsame thing in 1875. In that year I submitted a design to the late Mr. Morant, the borough engineer at Leeds, who at once saw the great advantage that would accrue from using them, and they have been used here ever since in all instances. D. ALEXANDER.

Leeds, May 20, 1884.

Peterborough Cathedral.—We should have mentioned that the very accurate and careful drawing of part of the cathedral, reproduced in our last number, was made from measurement by Mr. Robert Garwood, who is, we are given to understand, one of the office staff of the contractors.

* The remainder in our next.

WATER SUPPLY AND ITS COST TO PRIVATE HOUSES.

SIR,—In view of the recent memorandum on water supply and its cost to private houses, may I ask through your columns a solution of the following inconsistency.

I have gauged my one cistern each morning immediately before the supply has begun to flow in, and find through fourteen days that I consume at the rate of 14,000 gallons annually. We are eight persons, all over fifteen years old, wash all linen at home fortnightly, and are as aquatic as possible in our bedrooms. But my rent is 45*l.*, with two water-closets, and, as the cistern is more than 10 ft. above the road level (what has that to do with value?), I am charged 55s. yearly, or more like 4s. per 1,000 than the pence you name.

Is this right?

AN ORDINARY HOUSEHOLDER.

BUILDING PATENT RECORD.*

APPLICATIONS FOR LETTERS PATENT.

May 9.—7,452, W. Sanderson and T. A. Moffit, Gateshead, Blind Furniture.—7,463, J. T. Eden, London, Combination Drain Tube.—7,464, J. T. Eden, London, Automatic Flushing-wheel Apparatus.—7,465, W. B. Dodd, Carlisle, Impervious Joint for Stoneware Pipes, &c.—7,484, A. B. Reck, Copenhagen, Heating with Exhaust Steam and Hot Water combined.—7,485, A. B. Reck, Copenhagen, Heating and Ventilating.—7,490, W. Clark, Brighton, Casting or Forming Ceilings, &c.—7,491, H. Stringer, Brighton, Chimney Pots.—7,493, J. B. Adams and J. Telford, Liverpool, Window-sashes.—7,507, H. Trott, London, Water Waste-preventer and After-push combined for Water-closets.

May 10.—7,523, S. Turner, Barrow Haven, Roofing Tiles.—7,546, S. Pickersgill, Derby, Open Fire-grates or Stoves.

May 12.—7,601, T. C. Messenger, Loughborough, Flushing Cisterns for Water-closets, &c.—7,610, G. H. Chubb, H. W. Chubb, and H. S. Ball, London, Door Locks or Latches.—7,613, J. L. Westland, New Brompton, Fire-escape.

May 13.—7,620, T. Abbott and M. Hawthornthwaite, Lancaster, Flushing Water-closets, &c.—7,622, A. W. Newton, Birkdale, Automatic Window.—7,632, T. W. Roberts and Yates, Haywood, & Co., Rotherham, Gill Stoves.—7,633, T. Smith, Brockley, and J. Drewitt, London, Window-shaking Preventers.—7,650, W. H. Luther, Glasgow, Astragals or Sash Bars.—7,660, W. A. Wyatt, Gosport, Sash-line Holder.—7,666, H. Doulton, London, Water-closet Fittings.—7,672, J. W. Brown, Leamington, Cooking-ranges.—7,675, R. Pringle, Blackheath, Cistern, &c.

May 14.—J. G. Connell, Glasgow, Double-valve Mechanism for Water-closets.—7,690, G. Candler, Maidstone, Construction of Conical and Pyramidal Roofs.—7,702, A. J. Boult, London, Smoke-consuming Grate. Com. by P. Antoine, Daraucourt, France.—7,705, C. J. Burton, Deptford, Ranges.—7,723, P. Dalton, London, Hot-water Apparatus for Warming Buildings, &c.

May 15.—7,730, A. B. Brady, Maldon, Sewer Ventilator and Manhole Cover, &c.—7,739, A. Purkess, Andover, Earth Closet Apparatus, &c.—7,748, E. B. M. Bond, London, Sash-fasteners.—7,763, T. L. Watson, Glasgow, Drain-pipes.—7,767, T. Prost, Adelaide, South Australia, Exhaust Ventilators.

ABRIDGMENTS OF SPECIFICATIONS

Published during the week ending May 17, 1884.

4,546, G. F. Harrington, Ryde, Ventilation. (Sept. 21, '83. Price 2d.)

There is an improvement on Patent No. 387 of 1883, in adapting the cowls to ventilate buildings, &c., by fitting vanes thereon to make them face the wind. (*Pro. Pro.*)

4,618, H. C. Paterson, Glasgow, Ventilating. (Sept. 28, '83, 2d.)

Communicating with and above the room to be ventilated is a chamber, whose sides are made with louvres, &c., and a current of air from the room is induced by jets of steam or air forced into the chamber. (*Pro. Pro.*)

4,684, A. J. Boult, London, Ventilating Apparatus. Com. by L. J. Wing, New York, U.S.A. (Oct. 2, '83, 6d.)

In a casting is mounted a fan, the blades of which are curved in cross section, and their pitch increases towards their ends. They are mounted on the shaft, so that they can be adjusted, whereby the pitch can be altered or reversed to make it either an exhaust or a forcing fan.

5,884, E. M. Wood, Natick, U.S.A., Greenhouses. (Dec. 28, '83, 6d.)

The roofs consist of a series of glazed sashes, and the sashes in one row are pivotted at their centres on a rocking shaft common to them all, whereby they can all be opened simultaneously.

Employers' Liability Act.—Working men who are subject to danger from accidents in the course of their ordinary work will do well to purchase, for one penny, the pamphlet on this subject published by Mr. G. Howe, giving the text of the Act and plain directions what to do in case of accident; "what to claim, when to claim, and how to claim."

* Compiled by Hart & Co., Patent Agents, 186, Fleet-street.

MEETINGS.

SATURDAY, MAY 24.

Edinburgh Architectural Association.—Excursion to the Forth Bridge Works, and to Queensferry Church, Dalmeny House, &c.

MONDAY, MAY 26.

Surveyors' Institution.—(1) Annual General Meeting and Distribution of Prizes. 3 p.m. (2.) Annual Dinner (at Holborn Restaurant, Venetian Saloon). 6·30 p.m.

Society of Arts.—Prof. W. Noel Hartley on "Fermentation and Distillation." (III.) 8 p.m.

TUESDAY, MAY 27.

Institution of Civil Engineers.—Mr. G. H. Stayton, Assoc. Mem. Inst. C.E., on "Wood Pavement in the Metropolis." 8 p.m.

Birmingham Architectural Association.—Mr. J. King James on "Architectural Perspective."

St. Paul's Ecclesiological Society.—Mr. J. D. Sedding on "Modern Ecclesiastical Art." 7·30 p.m.

Anthropological Institute.—(1) Mr. Theodore Bent on "Remains from Cemeteries in the Island of Antiparos." (2) Mr. H. O. Forbes on "The Koeboes of Sumatra." (3) Dr. J. G. Garson "On the Osteology of the Koeboes of Sumatra." 8 p.m.

WEDNESDAY, MAY 28.

British Museum (Anglo-Saxon Room).—Mr. J. F. Hodgetts on "Early English or Anglo-Saxon Antiquities." (VI.) The Coin. 2 p.m.

Society of Arts.—Mr. J. Probert on "Primary Batteries for Electric Lighting." 8 p.m.

THURSDAY, MAY 29.

Society of Antiquaries.—(1) Dr. Birch on "A Bronze Sella Prætoria from Cairo." (2) Mr. W. H. St. John Hope on "The Corporation Maces of the City of Rochester." (3) Mr. Edwin Freshfield "On the Palace of the Greek Emperors of Nicæa at Nymphia." 8.30 p.m.

Institution of Civil Engineers.—President's *Conversazione* at the South Kensington Museum. 9 to 12 p.m.

Society for the Encouragement of the Fine Arts.—Third *Conversazione*, at the Galleries of the Royal Institute of Painters in Water Colours. 8 p.m.

Society of Arts (Applied Chemistry and Physics Section). Dr. William Ramsay on "Some Economical Processes connected with the Woollen Industry." 8 p.m.

Royal Institution.—Professor Dewar on "Flame and Oxidation." (VI.) 3 p.m.

Edinburgh Architectural Association.—Mr. David MacGibbon, President, on "Scotch Castles and Houses of the Fifteenth, Sixteenth, and Seventeenth Centuries."

FRIDAY, MAY 30.

Architectural Association.—Mr. C. R. Pink on "Heraldry." 7·30 p.m.

Society of Arts (Indian Section).—Mr. C. Purdon Clarke, C.I.E., on "Street Architecture in India." 8 p.m.

Royal Institution.—Mons. E. Mascart, Professeur au Collège de France, "Sur les Couleurs" (in French). 9 p.m.

Miscellanea.

Large Sales of Suburban Building Land.—There were several sales of suburban building land in the vicinity of the metropolis at the Auction Mart last week. Messrs. Baker & Sons offered for sale a freehold building estate in Hammersmith, consisting of 1¼ acre of land, having frontages to the Fulham Palace-road, and also to Church-lane. There are nine houses on the estate producing rentals of 228*l.* per annum. In the particulars it was urged that the estate, from its commanding position, near to the Hammersmith Station, is capable of being advantageously developed for building. It was sold for 4,400*l.* Messrs. Baker also submitted for sale the freehold building estate known as Hanwell Park, close to the Hanwell Station of the Great Western Railway Company The property, which contains 107 acres, together with a mansion and out-buildings, was submitted in lots, the auctioneer observing that the estate offered, to land companies and others, a favourable opportunity for the development of a building scheme. Brick-earth, gravel, and sand of good quality existed in large quantities on the estate. Several of the lots were sold, containing altogether nearly 60 acres, the proceeds of the day's sale being 26,500*l.* Messrs. W. & F. Houghton also sold the East Lodge Estate at Wanstead, containing a little more than 4 acres, for 4,900*l.*, and also between three and four acres of land at Walthamstow for 3,600*l.* Messrs. Thurgood & Martin submitted for sale a freehold building estate at Wimbledon, a short distance from the Wimbledon Station, and also from another station about to be constructed. The estate, which contains nearly 13 acres, was sold for 7,250*l.*

Patricroft.—The Local Government Board have recently approved of plans of new separate cell vagrant wards to be erected at the Workhouse, Patricroft, for the Barton-upon-Irwell Board of Guardians, at an estimated cost of 1,000*l.* The plans were prepared by Mr. John Price, Assoc. M. Inst. C.E., engineer and surveyor to the Barton Sanitary Authority.

New Bank Buildings at Balham.—With reference to our notice of these buildings in the *Builder* of the 17th inst. (p. 718), it should have been stated that the whole of the Bath stone was supplied from the Westwood quarries of Messrs. Randell, Saunders, & Co., Limited.

The Future of the Grand National Opera House Site.—After remaining for some six or seven years in its unfinished condition, during which period it has from time to time been rumoured that the building was about to be completed,—at one time the report being that it was to be finished for its original purpose, whilst at another time the rumour was that it was to be converted into an hotel,—the fate of the unfortunate Grand National Opera House building on the Thames Embankment is at length settled. The materials of the unfinished structure are now announced to be sold by auction, in order to clear the site for the erection of buildings of a different class, which will shortly be commenced by a company of capitalists who have purchased the site with the half-finished Opera House as it now stands, together with a number of adjoining houses in Cannon-row, and three shops in Parliament-street, opposite the new Government Offices. The sale of the materials will occupy several days next month, Messrs. Fuller, Horsey, & Co. being the auctioneers. It will be remembered that Mr. Webster was the contractor for the building, and it is well understood that the cost of the structure, up to the time when the works were brought to a stand, was little short of 50,000*l.*, the excavations and foundation walls alone, before the superstructure was proceeded with, having involved an outlay of more than 15,000*l.* When the works at the building were suspended, an enormous amount of iron work had been got in, and the level of the grand tier had been reached; and although the elevation had been carried to a considerable height above the road level of the Embankment, the building as it appears from that thoroughfare does not represent its present attitude internally, as both the auditorium and stage portions extend very much below the main line of street. The catalogue, containing a list of the materials to be sold, states that they consist, amongst other articles, of 5,000,000 bricks; 400 iron riveted girders and joists; 100 cast-iron columns and stanchions; 20,000 ft. run of flooring joists; six tons of ornamental cast-iron rail fencing and gates; 100 loads of timber; and 1,400 scaffold boards and poles, in addition to the valuable Portland stone work with which the Embankment façade and the two side frontages are faced. We understand that the new buildings which are intended to be erected on the site as soon as cleared will consist chiefly of residential chambers and offices, having frontages and approaches both on the Embankment and in Parliament-street.

Land in New South Wales.—The amount of land in occupation in New South Wales on 31st of March, 1883, was 30,714,349 acres, as compared with 10,619,532 in 1874, while the number of occupiers was 39,760, as compared with 32,258. The quantity of land sold during the year 1882 by the Government of New South Wales, otherwise than conditionally, amounted to 1,029,998 acres, or 300,000 less than in the previous year; while the number of acres sold conditionally during the same period was 2,392,219 acres, or 63,000 more than in the previous year, or 1,000,000 more than in 1873. With regard to the lands leased for pastoral purposes, the preference seems to have been decidedly in favour of annual rather than longer leases; for whereas the number of the latter in the ten years had only risen from 4,070 to 4,337, the number of annual leases had increased from 14,260 to 20,662; and while the area included under the latter had actually decreased from 239,178 square miles to 199,748, the area under the annual leases had risen from 14,648 to 28,008 square miles.

Exhibition of Works in Wood.—The collection of examples of carpentry and joinery which has been formed at Carpenters' Hall, in London-wall, and which has been more than once brought under the notice of our readers in the course of its formation, will be open to the public on Monday next. It will be found that a very considerable number of models, specimens, and drawings have been got together in the large hall of the Company, where they are extremely well shown. The competition for prizes has been keener in some departments than in others, the highest level attained being by the carvers in wood. We shall give full details of the exhibition next week.

Mayfield.—Large additions and restorations are about to be made to the Old Palace at Mayfield, Sussex. They will be carried out from the designs of Messrs. Pugin & Pugin, of Westminster.

Working-Class Progress in New South Wales.—According to the Statistical Register of New South Wales, the wages of the labouring classes in that colony appear to have been steadily maintained during the last ten years, with a tendency to rise in the case of farm labourers, persons engaged in agriculture, and domestic servants. At the same time there has been a marked decrease in the cost of clothing, which is, however, counterbalanced to some extent by the increased cost of many kinds of provisions, which will become cheaper as railway communication with the agricultural districts becomes increased. The percentage of the wage-earning class owning land or house property is stated to be larger in New South Wales than in any country in the world, with the exception of portions of the United States.

The Association of Public Sanitary Inspectors.—This new but flourishing and useful society,—of whose proceedings our columns have on several occasions contained particulars,—will hold its first annual dinner on June 7th at the Holborn Restaurant, when the President, Mr. Edwin Chadwick, C.B., hopes to be able to take the chair.

TENDERS.

For new roads and drains on the Eversfield Estate, St. Leonard's-on-Sea. Messrs. Fowler & Hill, architects:—

A. Oliver, Brockley	£1,000 0 0
P. Jenkins, St. Leonard's	720 0 0
J. Oliver, Hollington	625 0 0

For building Mission-hall on the Noel Park Estate, Hornsey. Mr. Rowland Plumbe, architect:—

Dearing & Son	£2,347 0 0
Mills	2,259 0 0
Goodman	1,989 0 0
Holloway	1,985 0 0

For the erection of New Mission-hall in rear of Sailors' Rest, Commercial-road, Landport, Portsmouth. Messrs. Davis & Emanuel, architect. Quantities supplied by Mr. H. P. Foster:—

W. Ward	£1,479 0 0
T. C. Cooper	1,470 0 0
H. & W. Evans	1,420 0 0
C. H. Roberts	1,376 0 0
W. R. & C. Light	1,349 0 0
G. Burbidge, (accepted)	1,283 0 0

For erecting eight houses at Brixham, Devon, for Mr. Pearse. Mr. G. Soudon Bridgman, architect, Torquay:—

Blatchford & Lee	£2,004 7 7
Wills & Tilley	1,760 0 0
Rundle	1,729 0 0
Couch & Patient	1,698 0 0
Hazlewood Bros., Brixham*	1,689 0 0

* Accepted.

For three cottages, Kingswear, Dartmouth, Devon, for Mrs. Barne. Mr. G. Soudon Bridgman, architect:—

Short Bros.	£597 0 0
Rundle	587 0 0
Winsor	549 0 0
Pack	524 0 0
Foaden	498 0 0
Guy	490 0 0
Wills & Tilley, Brixham (accepted)	468 0 0

Accepted for schoolmaster's residence, Chudleigh, Devon, for Mr. W. Rouse. Mr. G. Soudon Bridgman, architect:—

Rattich, Chudleigh	£297 10 0

Accepted for various works for the Right Honourable Lord Clifford, Ugbrook Park, near Chudleigh, Devon. Mr. George Soudon Bridgman, architect:—

Hayes Farm House.

Gilliard & Bovey, Kingsteignton	£495 0 0

Foster Ville Farm House.

Yeoman, Kingsteignton	£245 0 0

Upcott Ville Cattle Sheds.

Ball & Shapley, Chudleigh	£120 0 0

Waddon Ville Cottage.

Ball & Shapley, Chudleigh	£186 0 0

Waddon Granary.

Widdicombe & Babbage, Chudleigh	76 9 0

For conservatory and repairs to a house, Elmfield-road, Bromley. Mr. St. Pierre Harris, architect:—

Crossley	£142 0 0
Taylor & Son	139 0 0

For additions and alterations to Wellbrook Cottage, Farnborough, Kent. Mr. St. Pierre Harris, architect.

Taylor & Son (accepted)	£314 0 0

[No competition.]

For painting and repairs to houses at Orpington, Kent. Mr. St. Pierre Harris, architect:—

Taylor	£202 0 0
Hart Bros	173 0 0
Smallwood	150 0 0
W. & F. Croaker (accepted)	117 0 0

Accepted for erection of premises for Mr. C. Bond, Blackheath:—

D. & R. Kennard	£1,035 0 0

[No competition.]

Accepted for erection of workmen's cottages, stabling, &c., for Mr. W. Brown, Burnt Ash, Lee:—

D. & R. Kennard	£810 0 0

[No competition.]

For additional buildings and alterations to the Clifton Congregational Church, Asylum-road, Peckham, S.E. Quantities supplied. Mr. J. Wallis Chapman, architect:—

T. & F. Drake	£3,354 0 0
Goad	3,349 0 0
Simmonds	3,337 0 0
Dove Bros.	3,228 0 0
Staines & Son	3,148 0 0
Canning & Mullins	3,120 0 0
Colls & Son	3,070 0 0
Woodward	2,930 0 0
Tarrant & Son	2,919 0 0
S. J. Jerrard	2,889 0 0
Martin, Wells, & Co.	2,850 0 0
Pack Bros.	2,550 0 0

For alterations and additions to the Congregational Church Schools at Blackheath, S.E. Quantities supplied. Messrs. T. L. Banks & Townsend, architects:—

Staines & Son	£3,224 0 0
D. & R. Kennard	3,220 0 0
Kirk & Randall	3,212 0 0
Hosking	3,130 0 0
Tongue	3,087 0 0
Rider & Son	2,999 0 0
Jerrard, S. J.	2,979 0 0
Outhwaite & Son	2,921 0 0

For the erection of new premises, Nos. 211 and 212, Tottenham Court-road, for Messrs. Hewetson & Milner. Messrs. Batterbury & Huxley, architects:—

J. & C. Bowyer	£3,335 0 0
M. Manley	3,269 0 0
Higgs & Hill	3,220 0 0
J. W. Dixon	3,133 0 0
Holliday & Greenwood	3,077 0 0
Patman & Fotheringham	2,983 0 0
B. E. Nightingale, Lambeth*	2,769 0 0

* Accepted.

For the erection of Studio, No. 54, Park-road, Haverstock-hill, N.W., for Mr. H. Tuck. Messrs. Batterbury & Huxley, architects:—

G. Eddy, Fleet-road (accepted)	£462 0 0

Accepted for villa residence and stable buildings at Abergavenny, Monmouthshire, for Dr. Norris F. Davey. Mr. E. A. Johnson, architect, Abergavenny. Quantities by architect:—

T. Foster, Abergavenny	£2,119 0 0

For the erection of a cottage villa, North-street, Abergavenny, for Mr. Thomas Protheroe. Mr. E. A. Johnson, architect. Quantities by architect:—

Edwin Sheen, Abergavenny (accepted)	£307 0 0
Thomas Foster	310 0 0
Ellis Stephens	330 0 0

Accepted for the construction of boundary walls, footpaths, &c., at Bailey Park, Abergavenny. Mr. E. A. Johnson, architect:—

J. G. Thomas, Abergavenny	£780 0 0

For Entrance-gate and Railing.

Hampton & Bromley, Abergavenny	243 0 0

For Iron Sidefence Railing and Stabling Enclosures.

G. Davis, Abergavenny	£239 0 0

For additions to Southlands, at Blackgang, near Ventnor, for the Isle of Wight Sanatorium, Limited. *Contract No.* 1. Mr. John G. Livesay, architect. Quantities supplied:—

A. Colenutt, Niton	£1,660 7 0
Edwin Hayles, Niton	1,638 15 0
Ingram & Son, Ventnor	1,550 0 0
H. Baldwin, London	1,453 0 0
Jolliffe & Sons, Ventnor	1,393 0 0
Silsbury & Kingswell, Ventnor*	1,246 0 0

* Accepted.

For additions to 49, Junction-road, Holloway, for Mr. G. H. Parkins. Mr. Banister-Fletcher, architect:—

Ward & Lamble (accepted)	£270 0 0

[No competition.]

For alterations to the Horns public-house, Hackney-road. Messrs. Bird & Walters, architects:—

Patman & Fotheringham	£948 0 0
Birch & Co.	881 0 0
Williams & Son	856 0 0
W. Shurmur	837 0 0
J. Anley	830 0 0
R. Marr	825 0 0
Jackson & Todd	759 0 0

For the enlargement of schools, Old Ford-road, Bow, for the School Board for London. Mr. E. R. Robson, architect:—

F. & F. J. Wood	£8,976 0 0
G. S. Pritchard	8,707 0 0
W. Goodman	8,680 0 0
W. Shurmur	8,598 0 0
W. Bangs & Co.	8,542 0 0
Steel Bros.	8,524 0 0
Perry & Co.	8,354 0 0
C. Wall	8,249 0 0
Atherton & Latta	8,238 0 0
J. R. Hunt	8,224 0 0
S. J. Jerrard	8,089 0 0
Wall Bros.	8,075 0 0
Stimpson & Co.	7,770 0 0

For the erection of Schools at Daubeney-road, Clapton, for the School Board for London. Mr. E. R. Robson, architect:—

F. & F. J. Wood	£19,546 0 0
W. Goodman	18,477 0 0
Jackson & Todd	18,244 0 0
C. Wall	18,184 0 0
H. Hart	18,149 0 0
W. Bangs & Co.	18,082 0 0
G. S. Pritchard	17,995 0 0
Perry & Co.	17,990 0 0
T. Boyce	17,950 0 0
C. Cox	17,888 0 0
W. Shurmur	17,892 0 0
Wall Bros.	17,789 0 0
J. R. Hunt	17,214 0 0
S. J. Jerrard	17,139 0 0
Stimpson & Co.	17,055 0 0

For the erection of St. James's Church and Presbytery, Bootle. Messrs. M. E. Hadfield & Son, Corn Exchange-chambers, Sheffield, architect. Quantities by Mr. D. J. Brown:—

—	Nave, Aisles, Chancel, and Chapels.	West End and Tower.	Upper Part of Tower and Spire.	Presbytery.
Fogarty	13,126 17 3	5,058	3,045	2,889
Thornton & Son	12,350 0 0	5,100	2,700	3,015
Ray	12,270 0 0	4,874	3,080	2,878
Mulholland & Son	*11,400 0 0	4,555	3,278	2,867
Leslie & Sons	11,311 0 0	4,925	3,015	2,836
Webster	11,200 0 0	4,660	3,047	2,786
Gabbutt	11,199 0 0	4,501	2,699	*2,599
Woods & Son	*10,500 0 0	4,250	2,220	2,700

* Accepted.

For the erection of Clifton-street Board Schools, for the Swindon School Board. Mr. W. H. Read, architect, Corn Exchange, Swindon:—

J. W. Snell, Maidenhead	£5,513 15 4
H. J. Rossiter, Bristol	5,349 0 0
W. J. & C. S. Young, Salisbury	5,100 0 0
A. King, Gloucester	5,098 0 0
H. Welch, Hereford	4,950 0 0
W. Gibson, Exeter	4,880 0 0
Howell & Sons, Bristol	4,880 0 0
J. Williams, Swindon	4,880 0 0
Stephens & Bastow, Bristol	4,790 0 0
W. Jones, Gloucester	4,750 0 0
C. Phillips, Swindon	4,750 0 0
T. H. Kingerlee, Oxford	4,749 0 0
G. Wiltshire, Swindon	4,595 0 0
A. J. Beavan, Bristol	4,554 0 0
T. Barrett, Swindon (accepted)	4,550 0 0
W. Cowley, Cheltenham	4,500 0 0

For alterations, &c., to premises known as Rutland House, Cambridge-road, Hastings. Mr. A. W. Cross, architect, Hastings:—

Vigor	£546 0 0
Avis	490 0 0
Rodda	465 19 6
Vidler	443 0 0

For the erection of a lamp factory, No. 1, Cross-street, Great Sutton-street, Clerkenwell, E.C., for Mr. J. E. Drummond. Mr. Thomas Durrans, architect, 44, Upper Baker-street, N.W.:—

Clarke Bros.	£2,280 0 0
E. Howard	2,268 0 0
J. Edgar	2,239 0 0
W. H. Butcher	2,215 0 0
C. Batchelder	2,036 0 0
Kirk & Randall	2,000 0 0
W. Brass	1,993 0 0
Colls & Son	1,927 0 0
H. & E. Lea	1,872 0 0
Mattock Bros.	1,777 0 0
A. G. Bolding (accepted)	1,687 0 0

Accepted for Wesleyan Schools, Bamber Bridge, near Preston. Mr. D. Grant, architect:—

Thomas Croft (Brickwork).
J. Williamson & Sons (Stonework).
George Hill (Woodwork).
William Clarkson (Slating, &c.)
J. Swarbrick (Plastering).
R. Crossdale (Plumbing, Painting, &c.).
Messrs. Metcalf & Dilworth (Heating).

Total amount of accepted Tenders ... £1,078 0 0

Accepted for New Wesleyan Chapel and Schools at Freckleton, near Kirkham. Mr. D. Grant, architect, Preston:—

Thomas Singleton (Brickwork).
M. Gardner (Stonework).
J. Gardner (Woodwork).
R. Crossdale (Plumbing, Painting, &c.).
J. Rigby (Plastering).
J. R. Bradshaw (Slating).
Metcalf & Dilworth (Heating).

Total amount of accepted Tenders ... £1,286 0 0

For building 36 cottages on the Westbury Park Estate, Barking, for Mr. Henry Copland. Mr. C. J. Dawson, architect, Barking:—

Mansfield, Stratford	£4,428 0 0
Argent, Barking (accepted)	4,284 0 0

For building pair of semi-detached cottages at Barking, Essex, for Mr. Jarvis. Mr. C. J. Dawson, architect:—

Drake, Barking	£450 0 0
Pegrome, Barking	425 0 0
Goodey, Barking	375 0 0

For sundry alterations and cleansing and painting work to the Workhouse at Romford, Essex, for the Guardians of the Romford Union. Mr. C. J. Dawson, architect:—

Barnes, Ilford	£285 5 0
Drake, Barking	280 0 0
Wood, Chelmsford (accepted)	249 0 0

For the erection of ambulance station adjoining the Eastern Hospitals, Homerton, for the Managers of the Metropolitan Asylum District. Messrs. A. & C. Harston, architects, 15, Leadenhall-street. Quantities supplied:—

T. Boyce	£11,119 0 0
B. E. Nightingale	10,937 0 0
Magee & Co.	10,725 0 0
Wall Bros.	10,713 0 0
Stephens & Bastow	10,499 0 0
W. Shurmur	10,440 0 0
Jos. Holland	10,335 0 0
Howell & Son	10,200 0 0
J. Garrud	10,181 0 0
S. Chafen	10, 30 0 0
H. & A. Brown	9,978 0 0
W. S. Joselyne,* 123, Borough	9,138 0 0

* Accepted.

For building Mission-hall and boundary-wall in Latimer road, Notting-hill, for the Committee of the London City Mission. Mr. J. Christian Hukins, architect:—

Higgatt & Brown (accepted)	£1,061 0 0

For Kenilworth Water Works (*Contract No.* 2) for the manufacture and erection in Kenilworth of two 12-H.P. Gas Engines and two sets of three-throw pumps. Mr. E. Pritchard, M.I.C.E., engineer, London and Birmingham:—

	"Otto."	"Clerk."
H. Young & Co., Pimlico	£3,510	£3,510
J. Hatton, Coventry	—	1,666
Pratchitt, Bros., Manchester	1,500	1,500
Crossley Bros., Manchester	1,499	—
Glenfield Co., Kilmarnock	1,418	1,355
Piercy & Co., Birmingham*	1,260	1,200
W. Glover & Sons, Warwick	1,161	1,161

* Accepted.

For Kenilworth Water Works (*Contract No.* 3), pumping station, pipe-laying, and water-tower. Mr. E. Pritchard, M.I.C.E., engineer. Quantities by E. J. Purnell, Coventry:—

C. Haywood, jun., Coventry	£4,700 0 0
S. Turner, Wolverhampton	4,608 8 7
Currall & Lewis, Birmingham	4,147 0 0
Evans Bros., Wolverhampton	4,062 0 0
G. F. Smith, Leamington	3,986 0 0
J. Fell, Leamington	3,850 0 0
Stinson & Kellett, Leicester	3,678 18 0
Holme & King, Kenilworth	3,643 0 0
H. Hilton & Sons, Birmingham	3,620 0 0
J. Biggs, Handsworth	3,600 0 0
J. Dickson, St. Alban's	3,593 0 0
G. Law, Kidderminster	3,537 0 0
E. Smith & Son, Kenilworth*	3,378 0 0
C. J. Corrie, Lichfield	3,221 0 0

* Accepted.

For re-building Nos. 10, 11, and 12, Regent-street, Swindon, for Mr. L. L. Morse. Mr. W. H. Read, architect, Swindon:—

H. Rossiter, Bristol	£2,935 0 0
Howell & Sons, Bristol	2,750 0 0
C. Phillips, Swindon	2,748 0 0
T. Barrett, Swindon	2,656 4 7
G. Wiltshire, Swindon (accepted)	2,564 12 0

For additions to the Station in Commercial-road, E., for the London Salvage Corps. Mr. Wimble, architect:—

Hall, Beddall, & Co.	£3,990 0 0
Lawrence & Sons	3,784 0 0
J. & J. Greenwood	3,762 0 0
Grover	3,753 0 0
Ashby & Horner	3,725 0 0
Morter	3,693 0 0

For making-up Ferme Park-road North (part of), and Ferme Park-road South, for the Hornsey Local Board. Mr. T. de Courcy Meade, engineer and surveyor:—

	North.	South.	Total.
Cooke & Co., Battersea	£766	£1,439	£2,205
Wilkinson Bros. Finsbury-park	520	992	1,513
McKenzie & Co., City	486	926	1,412
James Pizzey, Hornsey	449	942	1,391
Alfred Walker, Holloway	391	753	1,144
E. & W. Iles, Wimbledon	395	730	1,125
F. A. Jackson & Sons, Finsbury-park	406	718	1,124
T. G. Dunmore, Crouch End (accepted)	364	655	1,020

For the erection of eight houses on the Spring Grove Estate, Peckham Rye. Mr. G. S. Harrison, architect. Quantities by the architect:—

Hedgley	£4,200 0 0
A. White & Co.	3,719 0 0
Turner	3,600 0 0
Eldridge	3,280 0 0
Lordan	3,100 0 0
Best	3,050 0 0
Croaker	3,000 0 0
Priestley	3,000 0 0
D. D. & A. Brown	2,990 0 0
Parker	2,800 0 0
Aldridge & Genvey	2,772 12 0

For St. Gabriel's Mission Church, Walthamstow. Mr. J. T. Bressey, architect:—

A. Reed, Stratford	£2,553 0 0
T. Rider & Son, Southwark	2,401 0 0
J. Egan, Buckhurst-hill	2,388 0 0
J. Morter, Stratford	2,370 0 0
W. Bangs & Co., Bow-road	2,286 0 0
Harris & Wardrop, Limehouse	2,269 0 0
J. A. Reed, Walthamstow	2,261 0 0
W. Larter & Sons, London	2,242 0 0
W. Shurmur, Lower Clapton	2,232 0 0
S. J. Scott, Walthamstow	2,100 0 0

For making and draining with sewer and surface water drains, Odessa-road, Cann Hall Estate, Stratford, E., for the Imperial Property Investment Company, Limited. Mr. G. H. L. Stephenson, surveyor, 57, Moorgate-street, E.C.:—

McKenzie & Co.	£1,099 0 0
Dunmore	1,069 0 0
Walker	1,034 4 0
Pizzey	954 0 0
Bell	858 0 0
Wilson (accepted)	847 0 0

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